

ECONOMIC HISTORY OF THE AMERICA

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To My Wife

PREFACE

OF THE more general objectives to be served by the study of a nation's economic history, which are discussed in the introductory chapter, there are two that have largely dominated the writings of those who have undertaken to present a historical account of a country's economic development. This is responsible for the fact that the writing of such history has commonly been undertaken by two groups, each approaching the subject with a primary interest in one or the other of these objectives and with a different background of general training.

One group, consisting chiefly of political historians who have come to recognize the important part played by economic conditions and interests in shaping history, has had as its primary objective the wish to provide the economic background that was deemed necessary for explaining and interpreting political or social history. In such cases, although the economic consequences of the historical developments are not ignored, they tend to take a secondary place and there is apt to be little effort at economic analysis for the purpose of explaining those developments or trying to find out what can be learned from them to promote economic progress in the future.

The second group is made up of economists whose primary objective is to study the historical development of the economic life of a country for the purpose of analyzing and understanding the forces and conditions that have been responsible for the successes or failures in the efforts of the people to raise their standard of living, to increase the economic strength of the nation, and so to promote its survival in the international struggle for existence. The economist clearly recognizes that economic goods and services are only means to the more ultimate ends set up as its objectives by any civilization. But as long as those objectives require an increasing amount of economic goods and services for their support, the economists' chief service in promoting the attainment of these ultimate objectives is to suggest what can be learned from the past that will further the efforts to obtain a more efficiently functioning economic order.

The approach to the study of economic history that dominates the presentation of the subject in this volume is that of the economist whose immediate and primary function is to study the production and distribution of wealth with the objective of learning how the nation's economic progress can be promoted and its standard of living advanced. It can be called the functional approach to economic history. Although the narra-

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tive should provide such knowledge of the general background of economic history as is needed for most purposes in the interpretation of political history, and has frequently been turned aside to indicate the reactions thus involved, this has been a secondary rather than a primary consideration in the selection and organization of the material. Some material has been included because it served certain of the other objectives mentioned in the introductory chapter, though for the most part these objectives are served also by the material primarily of significance in relation to the major objective.

Among the topics often omitted or receiving scant notice in similar volumes, the author has devoted special attention to the economic problems of war as exemplified in our three greatest wars, in the belief that the record shows much that had not been learned from sad experience and that the need for learning is urgent. Since the nation did not live in economic isolation and economic developments in the rest of the world were an important factor in shaping its economic growth, as well as one often overlooked, a summary survey of the most significant has here been attempted. The rise of modern capitalistic industry (about which some accounts tend to center) being only one factor in the problem, however important, the author has sought to make the narrative and analysis broad enough to provide a well-rounded picture of the various segments and general structure of the whole American economy during the different stages of its development. He has tried to give somewhat more attention to the reaction of noneconomic factors on the country's economic development than most; but this is an endlessly ramifying subject and between limitations of space and of vision the result falls much short of what might be desired.

The most serious gap is the lack of any real account of the developments in the physical and biological sciences and their applications, a factor of the utmost importance, as the subsequent analysis indicates, but entirely beyond the possibility of adequate treatment here. Since the effort to promote the economic well-being of the people has been made the central theme and unifying problem of the book, it is evident that the success achieved could be made clear only by an account of the advance in the standard of living. Hence, despite the meager data and lack of investigation in this topic, the author has been venturesome enough to attempt a summary—all the more essential since so few seem to realize the actual character of the gains that have been made. .

Facts are the basis upon which the structure of history must be founded, even though their number may sometimes appall the reader. From the scientific point of view one of the fortunate characteristics of the facts of economic history is that so many are susceptible to statistical measurement and a growing number have been so measured. This for-

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fortunate circumstance should be taken advantage of. Convinced that such quantity measurements are essential for an accurate evaluation of many data, the author has not hesitated to use considerable statistical material; though as far as seemed feasible he has substituted graphs for tables much more extensively than has been customary and, but for limitations of space, would have employed many more. Long experience has shown that graphs provide by far the easiest and most effective means for impressing upon a reader the important points in a statistical series.

Statistics have generally been given in approximate round numbers and, except where it seemed important for the purpose in hand, the author has not taken the great space that would be required to point out possible sources of error in their use. This will explain some of the apparent inconsistencies in the data presented; and it must always be remembered that the handling of statistical data is a treacherous undertaking. In view of its great current importance and value, the history of the period since 1860, and especially that since 1914, has been given in much more detail than for the earlier periods.

Although facts are the basis of history, the history that ends with their mere narration is largely sterile. To give the facts significance and value their relationship to some human problem of importance must be made clear. This book endeavors to do so by making the struggle of the American people to raise their standard of living the central and unifying problem of this history and by pointing out, especially in the introductory chapter, the relationship of the mass of the factual material to this problem. Yet the full value of the facts—their value for the purpose of future guidance in both individual and social action—is attained only as the events and developments covered by the facts are interpreted and explained, and as the influence of the various factors that determine economic progress is made clear. Therefore, throughout, the book seeks above all to stress the analysis of the causes chiefly responsible for the results obtained by the American people in their attack on this fundamental economic problem.

A personal mastery of the huge mass of material that should be covered for such a history is far beyond the limitations of a single lifetime. Economic history requires a far wider range of knowledge than any other branch of economic research. Ideally the economic historian should possess most of the knowledge of a large and well-rounded Department of Economics, to say nothing of the desirable knowledge in the related social sciences. The impossibility of covering such a wide field must be the main excuse for such shortcomings as his work may disclose. The author's indebtedness throughout to the work of others will be patent to those familiar with the literature; and, though this is seldom indicated in footnote references, the most used of these sources will be found listed in

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the bibliography. The greater portion of what might be claimed as original contribution consists in the selection and organization of the material presented and in its interpretation and analysis. In covering so wide a field the author cannot hope to have escaped errors of fact and he has not hesitated to express views on matters of opinion with which others may well disagree.

For encouragement and efforts to facilitate the writing of this book in its earlier stages the author is chiefly indebted to his former colleague, Dean L. C. Marshall. Of great benefit have been the suggestions of Prof. M. W. Jernegan, who read Chaps. IV–XII inclusive; those of Prof. Jacob Viner, who read Chap. XLIV; and those of Dr. F. H. Harbison, who read Chap. XXXVI. The responsibility for the views expressed therein is entirely the author's. Other colleagues have kindly helped on various points. Several National Youth Administration students have assisted in the typing of the manuscript and the preparation of charts.

For the kind permission to use certain statistical material and to reproduce a number of maps and charts the author is indebted to several sources. The American Geographical Society consented to the use of several maps taken from the "Atlas of the Historical Geography of the United States," which it published in cooperation with the Carnegie Institution of Washington. The use of statistical data and several charts, mainly drawn from its "Studies in Enterprise and Social Progress," was granted by the National Industrial Conference Board. For the use of the map of canals the author is indebted to the Carnegie Institution of Washington, for the chart on distribution to the Twentieth Century Fund, for the chart on division of income among major claimants to the Brookings Institution, and for the chart on the labor supply to the Committee on Social Security of the Social Science Research Council.

CHESTER W. WRIGHT.

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EDITOR'S FOREWORD

IN "Economic History of the United States," Professor Wright presents in a single volume a comprehensive and definitive treatment of the development of our national economic life. It is based upon careful and exhaustive research and has been tested for many years in classroom presentation at the University of Chicago.

Professor Wright traces the economic progress and achievements of the nation from the background and environment of the colonial period, in which it had its birth, through the period of reconstruction following the first World War. As would be expected, while he adequately treats the earlier economic history of the nation, he devotes his major attention to developments since the Civil War. His treatment provides an excellent chronological perspective of the main events affecting our national life from its foundation through 1940. He likewise gives a penetrating analysis of some of our broader social and economic problems, such as transportation and communication; agriculture and other extractive industries; manufacturing; labor; domestic and foreign commerce; money, banking, and financial institutions; the government and economic life; and the national standard of living. Of particular interest are his careful analysis of the depression of 1929 and his objective evaluation of the experimentation of the New Deal in the period from 1933 to 1940. The author has brought to bear upon his materials the critical eye of a careful historian and a sound economist.

Needless to say, Professor Wright's treatise is indispensable to instructors engaged in the teaching of economics in colleges and universities. It is equally important to those engaged in the teaching of history. Schools of business, which have not placed the emphasis they should have upon the development of our national economic life, will find in this treatise a careful analysis of major movements affecting private business and the development of business institutions.

Business executives who are anxious—and rightly so—concerning the future of private business will find here an excellent basis for understanding and evaluating present-day trends in the changing relation between government and economic life.

"Economic History of the United States" is a volume in the series of Business and Economics Publications, which is sponsored by the University of Chicago Press and the McGraw-Hill Book Company, Inc., in cooperation. The fact that there are many other series in this field of study calls for a brief word of explanation.

EDITOR'S FOREWORD

During recent years programs of study of departments of economics and the curricula of schools of business have been undergoing fundamental changes. In departments of economics increasing emphasis is being laid upon the practical aspects of the problems with which those departments deal. In schools of business more emphasis than hitherto is being placed upon the theoretical background of their problems. Meanwhile business itself is undergoing profound changes. Government more and more intervenes in business. In these circumstances there is an increasing demand for studies which are prepared with these trends in mind.

The various titles in the series of Business and Economics Publications, in so far as there is need, emphasize the changing relation between government and economic life. Whether one agrees or disagrees with the flood of legislation that has swept over the nation during the past decade, the fact is that the legislation is here and that business must make its adjustments to it. Although much of this legislation may be revised as time goes on and some of it may be repealed in its entirety, it is safe to predict that the major portion of it will continue as a part of our national social policy. Students in the social sciences as well as businessmen should have an appreciation of the new standards of business conduct and the new administrative machinery which the government has set up, the operations of which profoundly condition modern business management.

Professor Wright's treatise is presented with the conviction that it recognizes the various trends to which reference has been made and represents the best in the tradition of scholarly research and writing.

WILLIAM H. SPENCER.

CHICAGO, ILL.,
May, 1941.

PART I

THE COLONIAL PERIOD

CHAPTER I

INTRODUCTION: THE CHARACTER AND SIGNIFICANCE OF ECONOMIC HISTORY

The Nature of Economic History. At the beginning of our study it is important to get clearly in mind an understanding of the general character of economic history and the purposes that may be served by the study of that subject. Only thus can we judge of the relative significance of the large mass of facts presented or appreciate the broader and most vital aspects of the problems with which we are dealing.

Economics or political economy has been defined as the science dealing with the activities of man in the processes of producing, distributing, and consuming economic goods or wealth, or more briefly the process of getting a living. Since getting a living is the primary objective of the business world, economics is sometimes called "the science of business." As it deals with the activities of men both individually and collectively, it is a social science as distinguished from a natural science. The economic history of the United States, therefore, deals with the methods and processes by which the people of this country have endeavored during the different stages of the country's development to supply their economic wants or get a living. Since the people of the country both as individuals and through group or national action have generally sought to devise better or more economical ways and means for getting a living, there has been a constant change in the methods and devices used. Thus an evolutionary social process is discernible and our study becomes a history of the evolution of industrial society in the United States.

To obtain a clearer idea of the nature of this study it is essential to understand the fundamental conditions underlying industrial society and the necessity for getting a living. These all go back to the fact that nature—our physical environment—does not freely supply enough things to satisfy man's wants. There is a lack of harmony between our wants and our physical environment. "In the sweat of thy brow shalt

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thou eat bread," the old Biblical phrase summarizes it; we must work for a living, even for our daily bread. One way by which this maladjustment can be in part overcome is by reducing the number of our wants, by leading the simple life of the ascetic, and by giving up as far as possible those desires that depend upon scarce material goods for their satisfaction; thereby, freed from most material cares, we may find a higher joy and more enduring satisfactions in a life of thought and contemplation. A second method would be to set to work and by altering, controlling, or cooperating with our environment and the forces of nature so to change the things that nature supplies in our environment as to adapt them better to meet our numerous wants.

Whether rightly or wrongly, it is this latter method that most of the world, especially that of our Western civilization, has chosen to adopt. The simple life has appealed to but few and the rest have set up as their ideal a life with an ever increasing number of wants depending upon material goods or services for their satisfaction. It is because economic goods, which are never an end in themselves, are the necessary means by which so many of these wants are satisfied that it is important for social progress that they be abundantly supplied. Consequently, this process of getting a living and the numerous activities of the business world are concerned simply with the problem of adapting our environment to meet our economic wants. In the last analysis economic history is a record of the changes or evolution in the methods and devices whereby man has sought through a better system of adaptation, or through cooperation between man and man and between man and nature, to obtain a more complete satisfaction of his economic wants.

Perhaps a concrete illustration will best serve to indicate just what is meant by this evolution of industrial society. Let us take as an example the economic order whereby most people of colonial times secured their breakfast and the method by which the majority of people today secure theirs. In those days nearly all the people were farmers and the greater portion of their wants was supplied by things that they themselves produced; the family was, relatively speaking, what is called a "self-sufficing" economic unit. The typical breakfast was doubtless very limited in character. Probably it included corn or wheat bread made from grain grown upon the farm, and ground and prepared in the household; pork or bacon from hogs kept on the farm and slaughtered and dressed by the farmer; milk, butter, and cheese from the farmer's cows; eggs from his own poultry; sugar, if he had any, was likely to be maple sugar from his own grove or he might have wild honey gathered in the forests; water came from his own spring or was brought from a neighboring stream. In fact about the only thing obtained from elsewhere was tea or coffee and these he often lacked. Moreover, the breakfast was cooked over a fire made of wood gathered from the neighboring woodlot,

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and the utensils employed, except for those of metal, were chiefly of home manufacture. In short, the work of the family produced nearly everything used; the household was economically independent and, had the rest of the world vanished, the family's breakfast would have remained substantially the same.

Contrast the situation of today. The farmer produces a very small proportion of his breakfast and more than half the population lives in towns or cities of over 2,500 population. In the case of the majority of the population, therefore, their bread is made of wheat grown in the Middle West, their bacon probably comes from the same section, and often their butter; their coffee from Brazil, their sugar perhaps from Cuba, their milk from anywhere within a radius of 100 or 200 miles, and their eggs from a still greater distance; their water is obtained from a distant source through an elaborate system of supply; their fuel may be wood from near-by forests or coal from distant mines or gas made from such coal, and their stove, kitchen utensils, furniture, linen, china, and silverware may have been gathered from many lands.

For the preparation, gathering, and distribution of all these products an elaborate and intricate mechanism has been developed: grain elevators, flour mills, packing houses, sugar refineries, and innumerable other manufactories established; railroads and steamships built and kept in operation with all the previous preparation in the way of lumbering, mining, and manufacturing incident thereto; an extensive system of wholesaling and retailing and the accompanying marketing facilities built up; banking, credit facilities, and insurance provided; and the extensive system whereby government, local, state, and Federal, aids, regulates, and protects business activities.

All of these activities constitute a part of the process whereby the typical American family secures its breakfast. Millions of people scattered over the world each contributing his little share to the total make up the wonderfully elaborate technical and social mechanism whereby we expect to find the various products of the world transformed and gathered together for our breakfast every morning from year to year. The result is a breakfast much better and more varied than that of colonial times and, by means of this more elaborate but more economical process of getting a living, it is obtained with much less effort and sacrifice. We are so accustomed to this and it is so much a matter of fact that we take it for granted and seldom stop to think of all the work and the elaborate mechanism that is involved in what seems to us a very simple undertaking. Yet this example will serve perhaps to give a more vivid and a clearer idea of the nature and content of the subject we are studying. Our economic history is an account of the changes which have taken place in the methods whereby the people of the country have sought to satisfy their economic wants from the simple ways such as were employed

by the colonists to the elaborate organization of the business world of today. It should make clear (1) the methods by which the total national income or wealth-producing capacity of the nation has been increased and (2) the influences which have affected the distribution of this wealth among the people.

Noneconomic Factors in Economic History. At this point, however, it is important to emphasize one fact very strongly. The economic wants and activities of a people make up only one portion of their desires and activities. Although this is undoubtedly a very important portion, some even think the most important, there are many other wants and forms of activity that go to make up that complex thing which we call life. All the instincts, the emotions, and the ideals that move mankind have a part in life and may become the dominant motives in our action and compel the purely economic ones to take a subordinate place. Religious, aesthetic, political, or moral ideals may induce an individual to accept heavy economic losses, to say nothing of occasions when life itself is demanded by the state and cheerfully sacrificed by the individual, for the sake of such ideals. Thus all these other forces react upon our economic life just as our economic life reacts upon them. Such being the case, it is obvious that we cannot separate our study of the economic life of a nation into a distinct airtight compartment independent of the rest of the life of the people and expect thereby to obtain an accurate understanding even of the business world and the varied factors that have helped to shape its form and activities today. History, therefore, if it would be accurate and complete must include all human achievement; it must be a record of what we may call the social process, a study of the various ways by which human society in its manifold aspects has endeavored to attain a more complete satisfaction of men's instincts, wants, and ideals—in short, a record of the progress of civilization.

For purposes of study, however, it is frequently found desirable to concentrate attention on some one phase or group of human activities instead of attempting to cover the whole range of man's endeavors. Thus history as generally taught in the past has dealt chiefly with political parties, the rise and fall of the political units that we call states or nations, and the wars arising in connection therewith. A moment's reflection will show that these political activities have occupied but a very small portion of the active life of most people and that they constitute only one among the many phases of the social process. Moreover, these political activities and events cannot be understood or explained without some knowledge of the conditions and human aspirations existing in other branches of human endeavor.

This is especially true of economic conditions and activities, and the growing recognition of this point is shown by the increased attention

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that historical writers have been giving to the economic life of the people, for this has become one of the most marked features in the recent trend of historical writings. This point of view is commonly called the economic or materialistic interpretation of history. It means simply a recognition of the fact that political events may be influenced and shaped by economic conditions and motives; it does not necessarily imply, as some claim, that these economic factors are the only ones worth study or even the most important, for their importance will vary greatly from time to time and nation to nation; it does imply that in the study of any appreciable phase of political history a recognition of their influence is likely to be essential.

In this volume, since our attention is centered upon the economic aspects of our history, the point of this discussion is to emphasize the fact that this phase of our history, just as with the political or any other phase, cannot be fully or accurately explained or interpreted wholly independent of all the other conditions, activities, and ideals that go to make up human life and shape the social process. We cannot of course expect within the limits of this book to describe or explain all of those other factors in the situation—to do so would involve, as has been pointed out, a history of our whole civilization—but we can, at least in part, avoid the dangers arising from this concentration of attention on economic activities by indicating some of the most important of these other influences as they have reacted on our economic life and by recognizing frankly that the greater portion will have to be omitted and that to this extent our study must remain incomplete.

The Purposes and Significance of the Study of Economic History. With this description of the nature and content of economic history in mind we can now turn to inquire as to the purposes that may be served by the study of such a subject in general, more particularly of the economic history of the United States. What is the use of studying such a topic; what specific ends may be served thereby; can it be made of value to an individual in satisfying his desires whether they are economic or of any other character; is it of value to society in furthering the development of any phase of the social process or the advancement of civilization? Unless we can obtain a satisfactory affirmative answer to such questions, there is no use in proceeding further. Only through the answer to such questions can we judge which facts and points in this study are important and deserving of most attention. Upon these answers we must depend for guidance in discovering the things that are of significance and value in promoting the well-being of mankind.

It has just been pointed out that the study of economic society or the business world is concerned with the problem of supplying our economic wants or of getting a living. The objective of this phase of

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human activity has been to get as good a living as possible and to do so with the least amount of sacrifice or expenditure of effort; in short, as economically as possible. How the national income has been increased and distributed is the fundamental problem of our study. This objective, therefore, suggests the primary purpose or value of our study. We explore the history of the changes in the processes whereby men have sought, by cooperating with other men and by a better adaptation of all the resources of nature, to secure a more complete and more economical satisfaction of their wants. With this end in view we record the new technical methods introduced, the different social institutions set up, and the developments which have taken place in the whole method of organizing the business world.

In each case we should stop to inquire: Did this change promote a more economical method of satisfying the wants of human society? Did this increase the national income? How did it affect the distribution of that income among the people? Only through such a study of the evolution of the economic order can we understand why the business world is organized as it is today, or how the various economic institutions function in furthering this process of satisfying our wants. Only thus, too, can we observe the mistakes made in the past or the failure to do things that would have promoted greater economic progress. For after all, as we shall see in many instances, man both individually and collectively does many unwise things even when intentions are the best. Society seems blind and groping, lacking in foresight and intelligent leadership, and the errors of the past are frequently repeated, for the lessons of history are hard to learn and progress often is attained only at great cost.

The primary purpose of a knowledge of past errors and successes, of the advantages and disadvantages of our existing industrial society in promoting the economical satisfaction of human wants, is as a guide for future action. Knowledge may serve to satisfy purely intellectual curiosity and to that extent become an end in itself, but its chief function is to provide guidance to better action. It has been said that history is philosophy teaching by experience. What we want to know is what the experiences afforded by our economic history can teach us so that in the future we can act more intelligently in promoting changes in the economic order such as will enable us to supply our wants more economically. Throughout our study of this subject the questions that should always be in the back of our mind are: What light does this or that point throw on our present-day problems? What lessons does this history teach that can guide us in our actions today?

We can distinguish two groups of problems or sets of actions where these lessons can be applied. The first concerns the individual as he is

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interested in carrying on his private business and earning a living. The second concerns the individual as a consumer of economic goods, as a citizen of the country, and as a member of human society. From these varied angles, his interest tends to coincide with that of the other members of the social group; his point of view is what we call the "social point of view," and is concerned with the economic welfare of society. As illustrations of the things that the businessman might learn from economic history may be mentioned the broader aspects of his particular business in relation to industrial society; the ways in which economic laws have shaped our economic development in the past and are likely to influence it in the future; the extent to which legislation may affect economic activity; the phenomena connected with periods of boom, crisis, and depression, or a period of war and its aftermath; the financial effects of variations in the supply of money and credit; the growth of the labor movement, and the present trends of development in agriculture, manufacturing, trade, and finance. This list suggests only a few of the ways in which economic history may prove of value to an individual in his effort to get a living. For the most part, as can be seen, these are related to the broader problems of business management rather than to the technical details; for that very reason they are important.

Yet, useful as the study may be to the farsighted men of business, its primary importance must rest upon its utility for that second group of problems affecting the individual as a consumer, a citizen, and a member of society. The social point of view which this involves must be our guide as far as the lessons of history are used to shape our action. As citizens of a democracy, where in the last analysis responsibility for political action and legislation falls upon every voter, the economic, as well as the other, phases of the nation's progress depend upon the wisdom and breadth of view of the voters and those whom they choose to guide the affairs of state.

The economic progress of the United States during its comparatively brief period of existence has been one of the most striking phenomena of modern times; in fact one is tempted to question whether the whole course of history can show its equal. That marvelous growth was, as we shall see, the product of an unusual combination of favoring circumstances, in which the wisdom and foresight of its citizens comprised but one factor among many; and even that did not prevent many mistakes. We cannot take it for granted that circumstances will always remain so favorable or that the preeminence in the economic world which the country has now attained will endure forever. The pages of history record the economic decline of too many of the great nations of the past. We must not assume that without effort we can escape this common fate. All the intelligence and wisdom that the citizens of a

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republic can apply to the economic problems of the times are needed in furthering its material progress. It is therefore as a part of our training for citizenship that the study of economic history should prove of special value.

Although this objective is concerned with the economic well-being of all the people as individuals, there is also the purely nationalistic objective, which looks to the study of economic history for the light that it can throw on such factors as tend to augment the power of a country in the struggle for survival or aggrandizement among the nations of the world. In this struggle the economic factor, always important, has had its significance vastly increased in modern times, chiefly through the rapid advance in the mechanization of warfare. Add to this the remarkable intensification of the spirit of nationalism which has swept the world in recent years and we can appreciate more clearly the significance that can be attached to this objective. Although it is true, generally speaking, that conditions promoting an advance in a nation's standard of living will also augment its political power, there are numerous cases where the two objectives do not, or are believed not to, coincide; certainly not in the short run. The sacrifices in their current standard of living for the sake of various national objectives, which the people of certain countries have been called upon to make in recent years, most clearly bring out this divergence, but the history of every nation will afford frequent illustrations of the point.

As citizens our interest is naturally centered in the economic as well as in all the other elements of progress that contribute to the well-being of the particular group of people who make up the state and to the enduring strength and success of the nation itself. Despite the fact that the economic interests of one nation are so often thought to be opposed to those of another nation and so have proved a frequent cause of war, we must recognize that the economic development of the whole world in recent centuries has been such that in the twentieth century, as never before, the economic well-being of the people of one nation has become bound up with that of every other nation. The economic effects of the first World War and its aftermath have impressed this fact upon the world with tragic force. Our economic interests as individuals and as citizens of a given nation compel us to take a broader point of view than that of a single nation. Notwithstanding the present nationalistic tendencies and the stress upon autarchy, we may hope that eventually a growing spirit of cosmopolitanism, which overlooks the distinctions between races and states and embraces all mankind in its scope, will prevail. For these reasons, therefore, it can be argued that the study of the economic history of a given nation may be of some value in furthering the economic progress of mankind.

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We have been describing the various ways in which the study of the history of industrial society may be of value as a guide to action on the part of the individual or state. Lest this be misinterpreted, a warning is necessary. This is the sole safe guide only in so far as the problem confronting us is purely economic in character. Often such is not the case, for, as was previously pointed out, man has many wants and ideals other than the economic and after all economic objectives are only means to these more ultimate ends. The satisfaction of such instincts and ideals may often run counter to economic interests; the enduring happiness and well-being of the individual or the nation is not to be measured on the purely economic basis of dollars and cents or material wealth. Even the businessman will find that such things as pride, anger, and love or religious, aesthetic, and moral ideals lead to actions at variance with his purely economic interests. Still more frequently do these factors enter into the problems confronting the citizen and the state. Such matters as the tariff, restriction of immigration, taxation, the railroads, or labor legislation, to suggest only a few, are all complicated by the necessity of considering other than the economic aspects in deciding upon a line of action in harmony with national well-being. Where such is the case, even when the economic considerations are the most dominant, the important thing is to remember that any decision leading to action should weigh and balance against one another all the social objectives involved.

Over against this warning about a danger that besets those who consider such problems purely from the point of view of the businessman or the economist may be set another warning about the opposite danger of ignoring or underestimating the economic aspects of many problems that are primarily concerned with other phases of our social life. Sometimes people have been inclined to look down upon the study of economics and economic activities as being concerned simply with low materialistic objectives and the chase after the almighty dollar, a pursuit which it is often said already occupies far too much of the attention of Americans. Even granting such to be the case it is a very shortsighted point of view that concludes therefrom that a careful study of the business world is not of very great importance to society. In fact the attainment of that greater culture and the development of those higher ideals, thus advocated, depend in no small degree on securing a more economical organization of our industrial society.

That man cannot live by bread alone is a principle to which all may agree; but neither can man live without bread. It is equally obvious that the greater and the cheaper the supply of food, the more time and energy will be available to man for the pursuit of more cultural ends and the development of higher ideals. The man living in an industrial society

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so backward in its development that the most constant work from early youth to old age will yield barely enough to supply the absolute necessities of existence has little chance for what we think of as cultural attainments. In looking back upon the wonderful achievements of that golden age of ancient Greece we are apt to forget the tribute levied on others and the degradation and slavery of the masses that accompanied it. Not only are energy and time over and above that required to earn the necessities of existence essential if man is to attain cultural development, but the pursuit of culture often necessitates economic resources and material goods. Education demands expensive equipment; so do the church and its activities, the fine arts, music, painting, sculpture, and literature. General culture, as judged by Western civilization, is most widespread among the people in those countries that have attained the highest economic development and the most efficient methods for supplying their material wants.

It may well be true that individuals or nations that have met with marked success in the accumulation of wealth often do not have the knowledge or ideals to enable them to use that wealth in ways that yield the highest and most enduring satisfactions of life. The "newly rich" furnish abundant illustrations. Many make this charge against Americans in general, saying that they have devoted themselves so exclusively to money getting that they do not know how to use the money wisely when they have it; they still need to develop a proper sense of the real and permanent values of life before they can learn how to live. Even if we admit the correctness of this assertion, it would still remain true that efficiency in the organization of our economic life is a fundamental factor in furthering the attainment of all that contributes to the highest well-being of the people. Nor would this be any less true if we chose the simple life as the ideal one and reduced our material wants to the bare necessities of existence so long, at least, as bread does not fall like manna from Heaven or nature supply those necessities of existence to the inhabitants of the earth in such abundance as to make them free. We may therefore rest assured that the study of economic history, though immediately concerned with guiding our action in the problems of securing the most efficient methods of satisfying the material wants of society, is at the same time promoting thereby the attainment of the cultural and other ideals that help to constitute all that is best in life.

Another objective that may be served by this study is a better understanding of ourselves either as individuals or as a nation. It is a commonplace today that the individual is largely a product of his environment; his habits, customs, mode of thought, beliefs, and ideals are shaped largely by the whole society in which he happens to be brought up. The same individual reared in another country might act and think very differently.

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Since economic conditions are an important factor in the social environment of the individual, he can really understand the conditions of which he is a product only as he attains a knowledge of that economic environment—that of his family, that of the locality, and that of the nation. Only as a person understands his environment can he begin to understand himself; with this insight he can view himself and his ideals more objectively and judge more wisely. Probably nobody can entirely throw off the bias of environmental influences, but the person who is totally blind to such influences lacks the best basis for sound judgment. As a study of our economic environment helps to provide a clearer understanding of this influence, it will help us to view life's problems more objectively and thus more intelligently.

Economic Factors in General History. There is still another purpose to be served by the study of our economic history and, as it is of sufficient importance to justify considerable attention in the course of our study, it demands some explanation here. Its importance arises from the fact that the course of events in our economic development has had a very great influence upon our political and social history. This is due to the reason, previously explained, that in the case of most people the greater portion of their active life is primarily given over to the struggle to get a living; their aims and ideals are to a considerable extent shaped by the conditions under which that struggle is carried on, and their attitude toward the political issues of the day is influenced by the question how this or that political action will affect their personal interests. It is for these reasons that the economic interpretation of history is coming to receive so much more attention, for without this background of economic conditions the political events of the past and the political issues and tendencies of the present cannot be thoroughly understood.

Although this is true of all political history in varying degrees, it has been of particular importance in the case of the history of the United States. The reasons for this are varied and, since they have been influential in their effect upon our history and since an understanding of them is essential for its interpretation, we may list the more important.

In the first place, the people who migrated to this Continent were for the most part primarily interested in the opportunities that it offered to get a better living, and they found themselves in a land of wonderfully rich and practically undeveloped natural resources. The unusual opportunities for the accumulation of wealth which this situation afforded attracted their attention and absorbed much of their energies.

In the second place, chiefly since the beginning of the nineteenth century, the great progress in scientific knowledge as applied through inventions has wrought marvelous changes in the technological processes used in adapting nature to meet our wants. The new opportunities thus

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opened have not only increased the attention attracted to industry but also wrought revolutionary changes in the character and methods of our industrial life. Where rapid changes take place in any phase of human activity, new problems arise; many things need to be altered and adapted to meet the conditions arising from such changes, since the existing social order has become more or less adjusted to the old methods of doing things and often does not fit the new methods. Thus the introduction of steam power and electricity and the resulting growth of the railroads, the great factories, the telephone and telegraph, or the rise of great cities all necessitated readjustments in many phases of life. These changes bring with them many undesirable results as well as great benefits. The conditions under which laborers work in our great factories necessitate safeguards against dangers that did not exist under eighteenth-century methods; the well-being of people living in great cities and dependent upon railroads, telephones, gas and electric service requires forms of social control that were unnecessary a century ago. Thus new laws and ordinances, local, state, and national, are needed and new economic problems enter into politics and become important issues. The effects of such industrial changes are by no means limited to the field of politics; they may react upon the prevailing code of morals, creating the need for a new ethics of business or upon the activities and even the dogma of the churches. It is because great economic changes have necessitated so many new measures of social control, chiefly taking the form of legislation, that the interaction between economic development and political history has been so important.

If we look at the leading political issues of today, we see that a large number are connected with essentially economic problems, such as labor, the trusts, the tariff, banking, the business cycle, or government ownership. It has been said that the changes in our industrial life have been so rapid in the last hundred years that our laws are a quarter of a century or more behind the times. The slowness with which the mass of the citizens of a republic comes to realize the need of laws to meet such changes constitutes a serious problem in a democratic form of government, though it may also aid in lessening the amount of hasty and unwise legislation. By bearing in mind the fact that some of the most revolutionary and rapid changes affecting the life of the people of this country, especially since the beginning of the nineteenth century, have originated in our economic order, it is clear why there has been an especially close connection between our economic and political history and why a knowledge of the former is so important a factor in contributing to an understanding of the latter and the political issues of today.

A third group of reasons may be suggested which have contributed to the particular importance of economic factors in the political history

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of the United States. One of these arises from the fact that the people of this country have enjoyed a high degree of religious freedom. Even in colonial times this was true as compared with Europe, though there were some colonies where the Church and the state were closely connected and religious persecution was frequent. Since the adoption of the Constitution, however, the Church and the state have been separated and a relatively high degree of religious freedom has prevailed. In consequence of these facts religious interests and conflicts, in marked contrast with the situation in most other countries, have played but little part in the political issues before the people. Another reason is that in a democracy there is no nobility nor are there social distinctions based upon noble birth. Where such an aristocracy exists its members may wield great power, political or social; they are prominent and looked up to; they possess a social prestige and influence such as most people desire. To protect and preserve this prestige they look down upon those engaged in certain lines of business; the tradesman is considered an inferior person and under a social taboo. Although the great economic development of the last century together with the growth of the spirit of democracy has done much to alter this situation, its influence is still important. In addition to the titled nobility of European countries there was often a military aristocracy, a product of European militarism and the large standing armies which it involved. Military officialdom, often closely connected with the aristocracy, also enjoyed great influence and social prestige and looked down on the civilian and the tradesman.

The spirit of democracy that developed in the United States led to the prohibition in the Constitution of all titles of nobility, and the fear of a military aristocracy, so noticeable just after the Revolution, combined with our political isolation, led to a policy of a very small army. As a result the opportunities for individuals to attain power and social prestige in these ways, so important in European countries, were relatively meager in the United States. Still, the desire of individuals to attain power and prominence remained and, since people were barred from satisfying that desire through these other channels, they fell back upon economic methods and distinctions, all the more readily since there was no important social class, unless it was the slave-holding aristocracy, that looked down upon business as socially taboo. Thus in the United States economic activities and success in the accumulation of wealth became a more common road to power and social prestige than in older countries. In these same conditions is to be found a partial explanation for the prevalence of that so-called "spirit of materialism" and general pursuit of the almighty dollar which is said to be so marked a characteristic of this country.

To summarize the reasons which have helped to make economic conditions of particular importance in the study of the political or other phases of the history of the United States; we find them in the unusual opportunities for economic gain that existed in a region of rich and undeveloped natural resources; the remarkably rapid changes in the methods and organization of industrial society which created many problems that became political issues; the prevalence of religious freedom; and the absence of a titled or military aristocracy and of any social disparagement of business activity, thus making economic success a more certain means to power and social prestige. It is because of the additional value that can be attributed to the study of our economic history through the light thrown on our political history that we shall feel justified in giving more attention to various economic events that played an important part in our political history than could be justified by their significance in a study which was solely concerned with the evolution of industrial society. By bearing this point in mind we may escape confusion as to whether the particular significance of the events narrated is political or economic, always remembering, however, that the history of the processes of adapting our environment to meet our wants, the evolution of industrial society in the effort to obtain a better living, is the primary subject of our study and that its immediate object is to further progress in the field of economic activity and thereby ultimately in all phases of human well-being.

Fundamental Factors Determining the Standard of Living. In order that we may more readily see the relationship of the many factual details that will be given to this central problem of raising the standard of living, it is absolutely essential that we should have clearly in mind an understanding of the fundamental factors that determine that standard in any nation or any given group of people. To make sure that this is clear before proceeding further, a summary in outline of these fundamental factors is desirable.

In the last analysis the actual standard of living—and it is actual, not ideal, standards with which we are dealing—of any given group of people is determined by what they produce plus what their environment provides freely and ready for consumption. If the group is not absolutely isolated but can trade products or services with other groups, its standard may be raised by securing these through exchange, but the amount so secured will still be determined ultimately by the amount of its own products desired by other groups and offered in exchange. The total amount of economic goods and services produced may be called the group or national income. It consists in physical quantities of goods and services the economic value of which is measured in terms of the monetary unit.

This national income is determined (1) by the quantity and the quality of the four factors of production that are available, and (2) by the way in which they are combined for purposes of production in the existing economic and social orders. Behind all is the motivating force based on the desire to raise the standard of living. The relation of the various factors that thus enter into the problem will be made more clear by the following summary:

I. The factors of production.

Production is a process of cooperation

A. Between man and his environment, promoted by the increase in knowledge, science, invention, etc. and leading to a more complete and efficient use of the resources and forces of nature.

B. Between man and man, promoted by specialization, exchange, and similar cooperative action through the development of more efficient economic and other social institutions.

The economist commonly makes a further subdivision of the two factors, man and his physical environment, into the four factors of production:

1. Natural resources.
2. Labor.
3. Capital.
4. Entrepreneurship or business management.

Better cooperation between man and his environment and between man and man affects these four factors of production by

- a.* Increasing their quantity, economically considered.
- b.* Improving their quality, economically considered.

These results may be achieved in a great variety of ways. The physical supply of natural resources in a nation may remain relatively fixed except as depleted by use, but can be augmented by territorial expansion. The economically significant supply in any given area can be increased by exploration and discovery and by scientific advance which finds new uses for resources previously thought useless, or for those already used for other purposes. In a similar way scientific or technological advance, by leading to better methods in mining, forestry, and agriculture or by providing better transportation facilities may increase the value of such resources. In the case of the factors labor and entrepreneurship the quantity depends first of all on the population, but also upon how many work, how long they work, and how intensively. The quality of these factors is improved by education, technical, scientific and business training, and whatever else may make them more efficient. The supply of capital depends on saving, and the quality of the capital goods in

which it is embodied is improved by all scientific and technological advance that leads to better machines, plants, etc.

With given quantities and qualities of these four factors of production the national income will be determined by the ways in which they are combined for purposes of production. Immediately this is decided by all those in direct control of economic enterprise such as corporation officials, partners, individual owners such as farmers, tradesmen, or professional men, and by the government. More fundamentally however it is determined by the character of the economic order and the institutional framework of the whole social order in which this economic order is set.

II. The social order or institutional framework.

For our purposes this social order may best be divided into three groups, each engaged in producing various kinds of goods and services:

A. The economic order, under private business.

B. The political order, under the state.

C. Other orders, under philanthropic, religious, social, and other control.

A. The main fields of private business are those

1. Creating chiefly form utilities:

Extractive industries, manufacturing, construction, certain utilities, certain personal and professional services.

2. Creating chiefly time, place, and possession utilities:

Transportation, communication, marketing, financing, risk taking, certain personal and professional services.

B. The main economic functions of state activity are those

1. Chiefly providing goods and services.

2. Chiefly regulating and controlling economic activities.

C. The main economic functions of the other groups in the social order are

1. The provision of goods and services.

2. The various reactions on the economic order.

Finally, it must be realized that there is constant and endless interaction between the factors of production and the elements that constitute the economic and the social orders.

Though the division of subject matter in the chapters of this book is in the main along the lines indicated by the preceding analysis of the chief factors that determine the amount of the national income rather than along those determining the distribution of that income (to be described shortly), it nonetheless diverges therefrom in many places.

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It will, therefore, help the reader to recognize the relationship of some of these scattered groups of detailed facts to the conditions determining the amount of the national income if they are briefly indicated at the start.

The developments affecting the economically significant supply of the factor natural resources will be found described chiefly in the chapters dealing with the public lands, the extractive industries, the westward movement of population, and transportation. Though population is the primary factor determining the supply of labor, the developments affecting its growth will be found discussed near the beginning of the account of each period rather than in the chapters devoted to labor where most of the other developments affecting the quantity and quality of this factor will be dealt with. In the case of the factor capital most of the general developments affecting its quantity will be noted in the chapters dealing with financial institutions. On the other hand the developments improving the quality of capital goods through progress in science and invention will be found widely scattered in whatever fields of economic activity the new devices were applied. The factor entrepreneurship is difficult to generalize about and so receives little attention as such aside from mention of a few general conditions affecting it in the chapters on labor. But the account of the varying ways in which entrepreneurs, as those immediately responsible for determining how the factors of production were combined and what business policies were pursued, acted in the various fields of economic activity is scattered throughout the book.

Since the division of subject matter in the chapters dealing with the chief fields of production, exchange, and distribution follows fairly closely along lines indicated in those parts of the preceding outline, the relation of the developments described in those chapters to the problem of what determines the national income will be fairly obvious. It should be clearly understood that the essential contribution to the national income of such lines of economic activity as transportation, communication, trade, and finance is to further the process of specialization and division of labor in those lines of activity primarily engaged in producing form utilities, such as the extractive industries, manufacturing, and construction. This includes specialization of regions in the use of regional resources, specialization of labor and entrepreneurship, specialization of capital goods in the form of more specialized machines, plants, etc., and specialization of economic institutions. All this is furthered by increasing the mobility of labor, capital, and entrepreneurs as well as that of goods and services, thus increasing the likelihood that all these economic resources will be used at the time and the place where they can make their greatest contribution to the national income.

Among the noneconomic elements which make up the framework of the social order, only the governmental can be given much attention in this volume. The economic activities and functions of the state are so numerous and so fundamental that it can be looked upon as an economic institution almost as much as a political institution and no study of economic history could leave this out of the picture. The broader aspects of the relations between government and industry will be noted in the chapters dealing with the state and the economic order. On the other hand, the ways in which government acted either in its function as a provider of economic goods and services or in that as a regulator and controller of private business will be found described in innumerable instances wherever there is mention of legislation.

The Distribution of National Income. What fixes the total amount of the national income per capita is the first and most important element to be considered in an analysis of what determines the standard of living, since this fixes the total that is available for distribution. This is the chief reason for adopting in this book an organization of the material that centers about the processes of production. It is also essential to know how this total is divided among the people of the nation and what the factors are that enter into the determination of that distribution.

The question how the national income is distributed is important for its bearing upon the standard of living, since it is commonly agreed that a very unequal distribution of that income will result in a lower average standard of living than could be obtained by a more equal distribution. This conclusion is based upon the principle of the diminishing utility of additional quantities of economic goods in satisfying the wants of any person. Thus an increase of \$10 in the expenditures of a millionaire will yield him less additional satisfaction than a laborer would obtain from an increase of the same amount in his expenditures. It should be noted, however, that, since people vary in the amount of satisfaction derived from a given amount of economic goods—as the ascetic and the sybarite—and there is no way of measuring these differences, we cannot determine just what distribution of the national income between different people would yield the maximum of total satisfactions any more than we can assume this would be secured by an equal distribution of income. Also, we should not overlook the fact that there are other social objectives besides the economic which may make too great inequalities in the distribution of income undesirable.

Since the division of the subject matter in this book is in the main along the lines suggested by the preceding analysis of the factors determining the national income and not to any appreciable extent along those determining the distribution of that income, it is the more important that we keep in mind just what the latter are in order that we may more

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clearly see the relation of the factual details to this problem of distribution. Hence we must inquire, What are the main factors that determine this distribution?

The institutions immediately determining this distribution can, for our purposes, be best classified into the same three groups used in the case of production, namely, (1) the economic order, under private business; (2) the political order, under the state; (3) orders, under philanthropic, religious, and other control.

1. Since it is the conditions in the first field, private business, that determine the manner in which much the largest portion of the national income is distributed, it is especially important to understand the main factors that operate in this field. As commonly classified practically all income in this field is divided into four forms each representing the return to one of the four factors of production:

- a.* Rent, the return to natural resources.
- b.* Wages, the return to labor.
- c.* Interest, the return to capital.
- d.* Profit (or loss), the return to entrepreneurship.

The shares going to each factor are determined, in the absence of state regulations, in the market by the conditions governing the demand for, and the supply of, each of these factors, though in the case of profit there is also the element of return or loss due to chance or risk taking. In the existing economic order the markets in which the law of demand and supply operates to determine these shares may be said to be fundamentally competitive in character. Actually what is considered to be a perfectly competitive market is seldom found and most markets are better described as more or less competitive in character, merging into monopoly at the other extreme. The presence of monopolistic elements tends to alter values and hence the distribution of income in favor of the monopolizer. Since every act of production and every development having an economic reaction will always affect demand or supply or the risk element, they will in consequence affect the return to one or more of these four factors of production and hence the distribution of the national income.

If, in reading the historical account of all the detailed developments that follow, one seeks to trace their relation to the distribution of the national income, it is only necessary to realize that all private business is a struggle on the part of everyone to secure a larger share in the distribution of that income. This struggle for income will appear more obvious in the efforts of powerful individuals, groups, or classes so to influence affairs as to augment their wealth and income. It is conspicuous in the conflicts between labor and employer, between capitalist and

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debtor, between landlord and tenant. There are also conflicts within these separate groups between different classes of laborers or of capitalists or landlords. Within a given industry there is a rivalry between different concerns, and various industries are in more or less rivalry with one another. There are conflicts between cities and between states as well as the conspicuous conflicts between sections and between nations. In fact the list of such conflicts would be almost endless for it might be said that there are as many different groups as there are families or even individuals, and each individual has economic interests that bind him to a wide range of groups.

2. The influence of the state upon distribution is exerted, just as in the case of production, by the activities which it assumes,

- a. Chiefly as a provider of goods and services,
- b. Chiefly as a regulator of economic activities, but also,
- c. Through the fiscal system adopted to obtain the revenue to meet expenditures.

The effects of the first of these forms of state activity will be found described in scattered places though briefly summarized in the chapters dealing with the state and the economic order. The effects of the second type of state activity will be found widely scattered in every field where there is mention of legislation primarily designed to regulate or otherwise influence action in the field of private business. The third form of activity involving the fiscal system is for the most part described in the chapters dealing with the state and the economic order, the chief exception being the history of the tariff which is dealt with in connection with manufacturing. The struggle between groups and classes as it takes place in the political arena in the effort to influence legislation affecting all three forms of the activities of the state will be in evidence everywhere. When it is realized that in recent years the state has taken between an eighth and a quarter of the national income through taxation and used much the greater portion to provide goods and services for the people, for the most part freely, it will be evident how important a factor in the distribution of the national income its activities may become.

3. The activities of the third group—the philanthropic, religious, etc.—not being a part of what is ordinarily considered the economic order, and much the least important in their effects upon the distribution of the national income will receive little notice. The distribution of such goods and services as is made by these groups is determined by their estimates of various social needs and is largely independent of the principles governing ordinary business transactions.

Having outlined the main factors entering into the determination of the amount of national income and its distribution as the basic elements

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that fix the standard of living, we may once more emphasize the great importance of keeping these in mind in order to appreciate the primary significance of the mass of detailed facts and developments described in the history that follows. Though, as indicated earlier in this chapter, the study of economic history has various objectives, such as helping to explain other phases of history or the economic factors making for national survival, its main objective, just as is true of the study of economics in general, is to raise the standard of living and thereby to promote the attainment of such other ideals as require economic means for their realization. Since the mode of living commonly chosen by most people along with those of the United States has involved an ever increasing dependence on economic means for its support, the following history, which seeks to explain how and why the American people succeeded to a degree unparalleled in the world's history in their effort to supply their economic wants and also why failures and errors prevented still greater success, should in some measure provide the basis for the social guidance that might lead to a still higher standard of living in the future.

CHAPTER II

THE AMERICAN BACKGROUND: THE NATURAL RESOURCES AND THE INDIAN'S ECONOMY

The Natural Resources. The economic order, we have seen, is engaged in a process of using the forces and resources found in our natural environment for the purpose of supplying our wants; it is a process of cooperation between man and his environment. It is obvious therefore that the character and success of a given economic order will be greatly influenced by the natural environment in which it is located; for that reason some account of the outstanding characteristics of the conditions existing in the United States is essential to our study. Since we may assume that most Americans are fairly familiar with this natural environment, it will suffice simply to point out its most significant features and characteristics.

From the economic point of view the combined effects of the physiography of the country, its temperature, and rainfall may be said to separate the United States into two great divisions nearly equal in area, those east and west of a line roughly marked by the 100th meridian. The eastern section consists of comparatively level and low lying plains broken by the Appalachian chain of mountains. The temperature of this section is moderate and the rainfall abundant and fairly evenly distributed throughout the year. The western region, on the other hand, is marked by a high altitude, except for the valleys on the Pacific coast, and is much more uneven, being traversed by two great mountain chains often reaching great heights. The temperature except along the coast is subject to somewhat greater extremes of heat and cold and, particularly important in its effects, the rainfall, except along parts of the coast, is insufficient for ordinary cultivation, besides having a very uneven seasonal distribution. The results of the combined effects of these conditions create a marked difference in the economic development and life of these two sections, as will appear later. Though these constitute the great divisions of the country, each of them is so large and marked with such variations within its own boundaries as to justify a more detailed description.

In the eastern great division we find, first, a coastal plain bordering on the Atlantic and extending to the series of mountain ranges which make up the Appalachian chain and stretch from northern New England to Georgia and Alabama. This coastal plain varies in width from 50 to 100



FIG. 1.—Relief map of the United States. (*U.S. Geological Survey.*)

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miles in the North to 200 or 250 miles in the South. It is traversed by numerous rivers which descend rapidly from the mountain ranges and afford abundant opportunities for the development of water power. Few of these rivers, except the Hudson and the Delaware, are navigable by boats of any size for an appreciable distance before the first falls are reached; a line connecting this series of falls on the different rivers constitutes what is called the "fall line." The coast is marked by numerous islands and bays and, from Chesapeake Bay north, a large number of excellent harbors.

The second region made up of the various parallel ranges which constitute the Appalachian chain is some 300 miles in breadth. Few of the peaks in these ranges rise much more than 3,000 feet above sea level but they constitute a fairly continuous chain, some 1,300 miles in length, with but one break affording easy access to the West—that by way of the Hudson and Mohawk valleys where the highest point is less than 500 feet above sea level. To the south the easiest passes to the West are found leading from the upper waters of the Potomac or the James into western Pennsylvania, West Virginia, Kentucky, and Tennessee.

The third division is the vast Mississippi basin, one of the richest agricultural areas of its size in the world. For the most part it is a relatively level or rolling plain and, in the chain of the Great Lakes together with the St. Lawrence, Ohio, Missouri, and Mississippi rivers and their tributaries, possesses an important system of navigable waters and sources of water power. Nearly all of this region east of the Mississippi River was originally covered with a forest growth while the western portion commonly known as the prairie lands had few trees.

At about the 100th meridian we pass to the second great division where the annual rainfall drops to less than 20 inches—too little for ordinary agriculture—and this portion is arid. From this point, where the so-called Great Plains start, there is a rapid though even rise in altitude till at the foothills of the Rockies it is nearly 5,000 feet above sea level. Next in order is the high and arid plateau region bounded by the Rocky Mountain chain on the east and by the Sierra Nevada and Cascade ranges on the west. This is one of the largest of the high plateau lands of the world, being for the most part between 4,000 and 6,000 feet above sea level; the great mountain chains that bound it rise several thousand feet higher, some peaks being over 14,000 feet. Except in the far south there are no low and easy passes through these ranges and the railroads crossing over them are forced to climb to an altitude of from 7,000 to 11,000 feet, descend to the high plateau, and finally climb once more over the ranges on its western border. The lack of rain checks ordinary agriculture except near the river bottoms or where irrigation is possible and the forest growth is mainly found on the mountain ranges where the rain

and snowfall is greater. Thus most of this region is suitable only for grazing purposes.

Finally, there is the region west of the Sierras and Cascades extending to the coast. From the mountain tops there is a steep descent to the valley lands drained by the Columbia, the Sacramento, and the San Joaquin rivers and bounded on the west by the low Coast ranges. In the rapid descent from the mountains these streams and their branches furnish numerous sources of water for irrigation and power. In southern California and in Oregon and Washington much of the intervening low land is arid; in the former, actual desert. Easy access to the sea is afforded by the breaks in the mountain ranges marked by Puget Sound, San Francisco Bay, and the outlet of the Columbia. Except for San Francisco Bay and Puget Sound good natural harbors are lacking on this coast.

The Climate and Rainfall. All of continental United States except Alaska falls within the temperate zone and so enjoys the climate, neither too hot or too cold, that has proved most conducive to human effort and progress. Although the width of the country from north to south, about 1,000 miles, permits of considerable variation in the temperature of different sections and thus in the crops that can be produced, there are few regions where either heat or cold goes to such extremes as seriously to lessen human effort. So far as such a region does exist it is to be found chiefly in the hot and humid section of the coastal plains bordering on the Gulf of Mexico or the inland semidesert areas of the far southwest. The crop-growing season between the last frost in spring and the first frost in the autumn varies from four months in the North to ten months in the South. In the region east of the 100th meridian the rainfall is adequate yet not excessive, varying from about 20 to 60 inches a year; moreover, it is fairly evenly distributed throughout the year. In the high plateau region to the west the rainfall is generally less than 20 inches a year, which is insufficient for the cultivation of crops under ordinary methods. To the west of the Sierras and Cascades some of the immediately adjoining areas in the north and the extreme south suffer from inadequate rainfall though in the section nearest the coast there is in the autumn and winter a season of considerable rainfall, in fact very heavy rainfall along the northwest coast, followed in the summer by a season of very little precipitation.

Forests. The forest area is largely determined by the rainfall. Originally practically all of the area of the country from the northern boundary to the Gulf of Mexico and from the Atlantic coast westward to the prairie lands near the Mississippi was covered by a thick forest growth which had to be removed before cultivation of the soil could begin. These forests included a great variety of trees, both hardwood and softwood. But from the beginning of the prairies west to the Sierras the

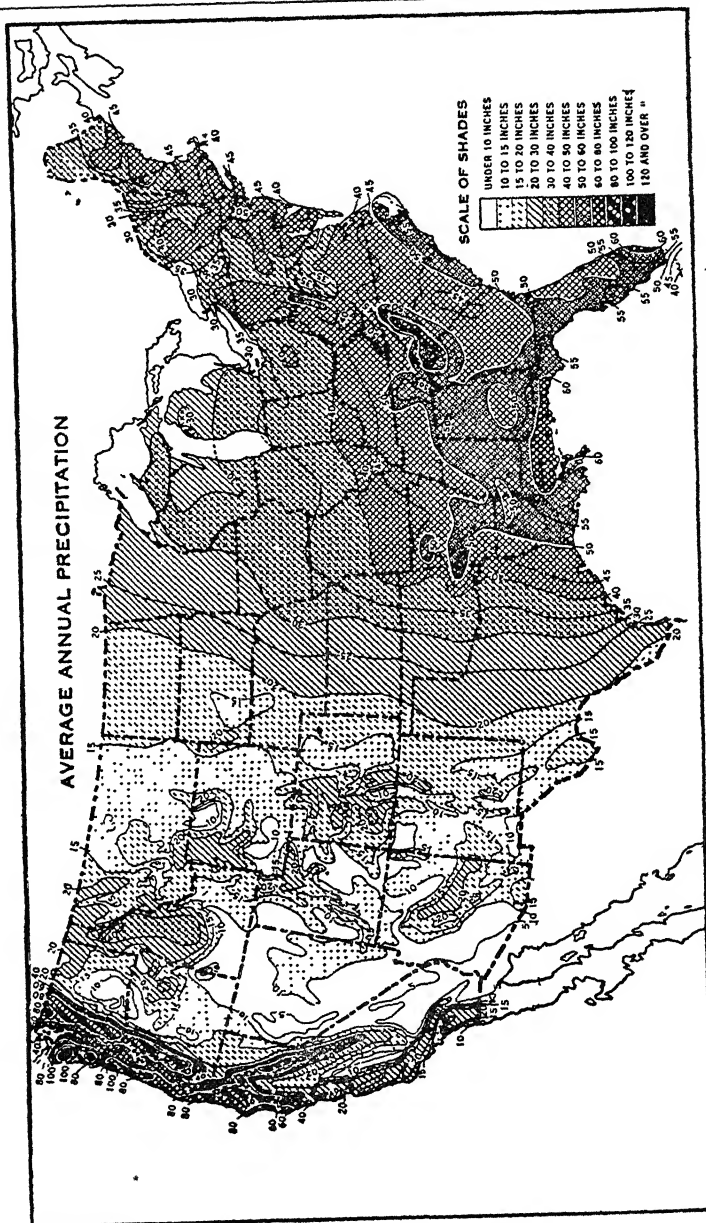


FIG. 2.—Average annual precipitation. (U S. Department of Agriculture.)

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forest growth was sparse and largely confined to the land along the river bottoms or the mountain ranges. The growth was not so dense as in the East and the timber less valuable. On the western slopes of the Sierras in the Cascade range of Washington and Oregon and also the Coast range with their heavy rainfall a heavy growth of large and very valuable fir trees was found, though to the southward in California, aside from the

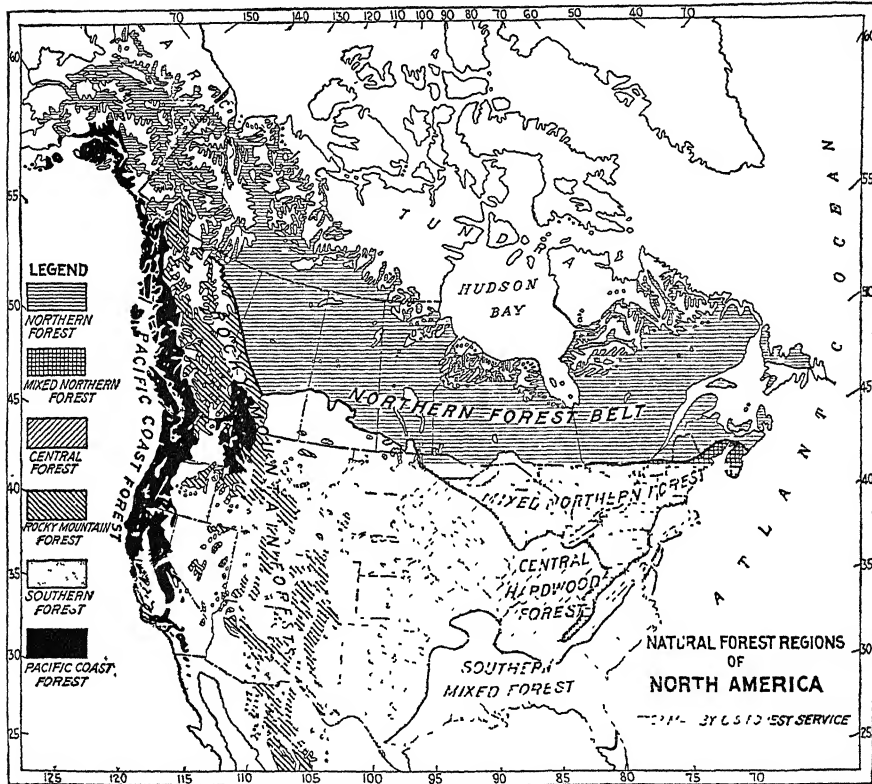


FIG. 3.—Natural forest regions. (U.S. Forest Service.)

few small growths of giant trees, the timber supply was of declining importance.

Mineral and Stone Resources. The variety and extent of the mineral resources of the country are unusual. Particularly important for modern industry are the great deposits of coal and iron found in many scattered areas, chiefly from the Rocky Mountains eastward. Copper is found in great abundance notably in northern Michigan and the western high plateau region, and lead and zinc chiefly in the section from the Mississippi River to and including the Rocky Mountains. Gold and silver deposits of great value have been found located for the most part from

the Rocky Mountains westward. In fact, of the most important and widely used metals, tin is the only one which is lacking, unless we include platinum, and the supplies of such metals as manganese, nickel, chromite, and antimony are very small. Mineral oil or petroleum has been found in great abundance, chiefly in the Ohio and Mississippi valleys and southern California, and natural gas usually is obtained in the same regions. Among the stones of widespread use all kinds are found, numerous varieties of granite and marble, and abundant supplies of sandstone and limestone, and in some sections phosphate. Deposits of bauxite used to make aluminum are also available, and clays suitable for brick and pottery are widespread.

Wild Game and Fish. A factor of vital importance to the aborigines and of considerable importance to the white settlers in the earlier period of colonization was the abundant supply of wild game and fish. Fish were abundant wherever salt or fresh water was found but were particularly important along the coasts of the North Atlantic and the Pacific Northwest. Among the wild game the bison and the deer were especially useful as food and for their hides, and the beaver and other fur-bearing animals were sought for their pelts. So far as meat and hides are concerned, we now depend chiefly on the domesticated animals brought in by the early Spanish explorers and settlers; fish continues an important element in our food supply. The wild animals now so greatly reduced in number are today mainly of value for such furs as they yield.

The Noncontiguous Territories. Thus far this description has been limited to the contiguous area of continental United States, since that is the only region that played any part in our economic development up to the end of the nineteenth century. Since then we have added to our non-contiguous possessions through the acquisition of the Hawaiian Islands, the Philippines, and Puerto Rico and the natural resources of these new territories, together with those of Alaska, now beginning to be developed, are becoming a factor in our economic life. Although portions of Alaska are capable of growing crops, this territory is chiefly valuable for its fisheries and mineral resources. The full extent and character of the latter are still to be determined, but considerable gold has already been obtained and the coal deposits are known to be valuable. The most significant fact as regards the natural resources of our island territories is that they yield many tropical products obtainable, if at all, only in relatively small amounts within continental United States. They thus furnish a particularly important supplement to our temperate zone products and help to round out the economic self-sufficiency of the country. However, owing to the somewhat narrow limitations of resources and quantity of output, the country still has to depend upon other sources for a considerable portion of its needs for many of these products.

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If we stop for a moment to consider this brief survey of the natural resources of the country, it will be seen that the outstanding feature is the great variety and abundance of them and the unusually favorable basis which they afford upon which modern industrial society can build in the effort to supply its economic wants. The most serious drawback of continental United States is the lack of adequate rainfall in the great plateau region of the West, and so far as we can now see this will always prove a fundamental obstacle to the intensive economic growth of that region. The favorable temperate climate is in part offset by the absence of many products of the tropics which are needed to supply our wants. Aside from these and the scarcity of a few of the less important metals our natural resources supply in comparative abundance that environment and those raw materials upon which society is most dependent. There are but two or three countries in the world that can begin to compare with the United States in possessing within a contiguous area such a favorable combination in the character, variety, and abundance of their natural resources; none of them has as yet reached anything like such a stage of economic or general cultural development as has the United States. Although some of these resources are by no means inexhaustible and in certain cases have already been seriously depleted, still in this physical environment the country enjoys conditions the importance of which, not only in its past but for its future economic development, can scarcely be exaggerated.

The Economic Life of the Indians. The settlers who came to America found the New World already inhabited by the Indians. It was therefore necessary to drive them out, subjugate them, or come to some terms of agreement before settlements could be firmly established. Since the primitive economic life and culture of the aborigines played an important part in the outcome of this conflict of races, it is desirable to gain some idea of its character. The disparity between the stages of economic and cultural development of the two races was so great that, after the white settlements had once been made, the red man could do nothing but occasionally harass the steady westward march of the white man, and it was only through the final adoption on the part of the whites of a paternalistic attitude toward them that the Indians were saved from extinction. Since the influence of the aborigines on the whites was so slight, a study of their economic life is chiefly of value as showing the characteristics of a primitive industrial society and thus, by way of contrast, enabling us to obtain a clearer conception of the form and characteristics of the economic order which the settlers had developed in Europe and sought to establish here at the time they came to this country.

This account of the Indian method of getting a living will be confined to that of the natives who lived in the area at present included in the

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United States and to the conditions that are supposed to have existed about the time of Columbus' discovery before those methods were altered by the influence of the whites. It should not be forgotten, however, that to the southward among the Aztecs of central Mexico, the Mayas of Yucatan, and the Incas of Peru a distinctly higher stage of civilization and economic development had been attained than among the Indian tribes north of Mexico.

At the time of Columbus' discovery it is estimated that there were not over 1,000,000—possibly not over 500,000—Indians living north of Mexico, the region east of the Mississippi being the most densely settled portion of the country. It is supposed that under their methods of getting a living this was as large a population as the natural resources of the region could sustain. This was because the Indians did so little to alter the resources freely provided by nature in the effort to supply their wants. They were therefore largely dependent upon the limited supply of natural resources available in a form nearly ready to meet these wants. For this reason and because the natural resources of the different sections of the country varied so greatly, the mode by which the Indians obtained a living differed in a marked degree in each section. Moreover, as getting a living chiefly consisted in getting food, it was the variations in the natural environment affecting the food supply that were of primary significance. Hence in explaining their mode of getting a living it is necessary to describe separately that employed in each section having marked variations in the natural environment.¹

The Food Supply of Different Regions. The first region where the natural environment was fairly homogeneous was the vast area east of the Mississippi River. There, as we have seen, the rainfall was abundant, the soil generally fertile and mostly covered with forest growth. The Indians living there had advanced to the stage of cultivating the soil and so did not depend entirely for satisfying their wants on what was freely supplied by nature. Among the cereals corn was the only one widely cultivated and proved to be the main reliance. Other cultivated crops included beans, squash, and to the south millet, melons, sweet potatoes, and smoking tobacco. The food supply thus obtained was augmented in one section or another by wild game, fish, wild rice, honey, berries, and maple sugar. There were no domesticated animals to supply meat. Cultivation necessitated a settled abode and the Indians typically lived in small villages. Their shelter was generally constructed of poles lashed together and covered with bark, mats, thatch, hides, or mud. Among the Iroquois long rectangular communal houses were found. Palisades for purposes of defense often were built about the villages.

¹ The following is based upon Clark Wissler, "The American Indian," 3d ed., New York, 1938.

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The second important region consisted of the Great Plains beyond the Mississippi, a considerable portion of which was too arid for cultivation. There was, however, sufficient vegetation to sustain the large herds of bison that abounded and the Indians were chiefly dependent upon that animal not only for food but for many other things as well. The meat dried and pulverized as pemmican would keep for many months. There was a very limited use of roots, wild berries, and wild game. Apparently, too, dogs, which with the turkey of the pueblo region were the only domesticated animals the Indians had, were sometimes eaten and served also as draft animals. Under such conditions, a nomadic life prevailed, and the tepee used as shelter was constructed of a few light poles covered with buffalo hides easily taken down and moved about. In the southern portion of the plains area, however, settlements were to be found cultivating the moister soil of the river valleys.

A third area centered about the Columbia River basin and the adjacent region to the east. Here abundant salmon was the determining factor in the food supply. The fish were caught at the time of the run and a portion of the catch was dried, smoked, and kept for future use. Along the coast where fish were abundant fairly permanent villages existed and totem-pole plank houses were built; in the interior a more nomadic life was necessary to secure sufficient food and the tepee was common. There after the salmon catch the Indians sought wild berries and later gathered roots or hunted wild game thus affording, as Wissler says, one of the most striking examples of the correlation between dependence on wild foods and instability of residence.

South of this region in California and the adjacent area to the east nature was much less bountiful. Such crops as corn, beans, and squashes which the Indians cultivated elsewhere require considerable summer rainfall and, as there was almost no rainfall in California at that season, no cultivation of crops seems to have been attempted here. Nor was the supply of fish and wild game abundant. Hence nuts, chiefly acorns, and seeds or roots, herbs, and even dried insects were the chief reliance for food; the moderate, relatively even, climate made shelters built of brush or tule reeds sufficient. The tribes in this region thus had a very low level of subsistence.

Finally, there may be distinguished the tribes living in the rather arid high plateau region in Arizona and New Mexico. There, in spite of the unfavorable environment, we find the most advanced state of Indian industrial society and culture in the country; in fact, otherwise, the problem of getting a living would have been most difficult. This development is probably to be explained by the proximity of these tribes to the still more advanced tribes of central Mexico. This region is fortunate in that the small rainfall that it has is largely concentrated in the growing

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season. In this way, by employing certain dry-farming methods or by the use of irrigation, crops could be grown in some sections. Thus corn, beans, melons, squashes, sunflower seeds, and cotton were produced under more intensive methods of cultivation than were to be found anywhere else in the country. Although wild game was scarce, the rabbit being the most common, the turkey had here become domesticated. A settled life was thus made possible and the groups lived in the stone or adobe pueblos such as are still in existence.

The Supplying of Other Needs. In supplying their wants other than for food the Indians used but few of the resources about them. The chief tools were of stone, wood, shell, or bone. There was no use of metals except for a little copper. The smelting and casting of metals appear to have been unknown to the Indians north of Mexico and the small amount of copper used was employed because it was easily malleable. As far as tools were concerned they were those of the Stone Age. For fibers the chief reliance was bast fibers such as grasses, twigs, and portions of the bark of trees, though cotton is claimed to have been used in the pueblo villages. The making of mats and baskets was carried to a high degree of perfection, particularly in the West. Spinning and weaving by hand were common and apparently the loom was employed in the pueblo region. Such clothing as was worn was for the most part made of deerskin or, where this was not easily obtainable, of woven fabrics. Ornaments of a great variety of materials were common. Pottery was generally made except on the Pacific coast, and a portion of the plains, though the use of the potter's wheel was unknown. In their agriculture a rough hoe and a crude pointed tool that served as a sort of spade were employed, so that only easily workable ground could be tilled and even that was little more than scratched. Fire was obtained by the fire drill. For water transportation the dugout and the canoe made of bark or skin were employed; for overland transportation, in the absence of draft animals, goods were carried in packs on the back, except on the plains where dogs were attached to a travois made of long poles which dragged behind on the ground.

The General Economic Organization. The economic organization among the Indians was thus of the simplest type. The real unit was comprised of family groups living together usually in small villages of a hundred or so population. These communities each produced substantially everything that they consumed and were therefore self-sufficing economic units. As a result almost no trade was carried on between the groups. The little that did exist—it seems to have been furthest developed in the Northwest—took the form of barter, though in some sections the strings of beads made of shell and used for ornament called “wampum” seem to have served as a form of money. Communication was by word

of mouth as there was no written language at that time. These conditions also resulted in there being very little division of labor except as between the sexes. The women carried on the household duties and cultivated the crops (though in the pueblo region the men participated in the latter activity), while the men did the hunting and fighting. Aside from the few who acted as priests and medicine men there was no differentiation in the work of the men. One exception is found in the Northwest where a few slaves, the captives of war, appear to have existed. On the other hand there was a considerable amount of cooperation between the members of the group in their larger undertakings, especially in hunting and fighting. Small wars were of constant occurrence due to the struggle for food areas or to the blood feuds which had no end. The very slight amount of accumulated wealth that existed naturally resulted in there being very little available as a basis for private property, and universal hospitality lessened the need for it.

The land, where there were permanent settlements, was considered as owned in common, though in some cases limited rights in its use were allowed to the family. Thus private property was limited to the shelter, produce, and personal effects of the family to which might be added a few intangible hereditary rights. Often much of this was looked upon as the property of the woman and descended through her. Custom and habit served in the place of law as the means for settling disputes. Such conditions resulted in a high degree of economic equality and a very democratic society. Even the chiefs, who were generally elected, had little power except as leaders in war. Custom and public opinion, especially the fear of the scorn and ridicule of the group, which in such a small and closely built community might become almost unendurable, supplied the chief means for social control over the individual. The small local groups were organized into tribes, chiefly for purposes of defense or ceremonial performances, and occasionally several tribes formed larger confederacies, that of the Iroquois being the most noted.

The Significance of Their Mode of Getting a Living. This brief survey of the Indian mode of getting a living will suffice to indicate the very primitive character of the industrial society that the white man found when he came to take possession of the Continent and, by comparison, the vast superiority which the whites possessed in the economic and general cultural civilization that they brought with them. For the aborigines successfully to contend against it was impossible; the civilization of the whites placed the natives at their mercy, to destroy or to aid as they saw fit. The relatively slight use of the resources and forces of nature which the primitive culture of the Indians permitted and the resulting high degree of dependence on food supplied with but little additional effort on man's part by the environment resulted in a mode of living

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almost completely shaped by the character of the food supply and a life almost entirely given up to the desperate struggle for food. Of what we consider luxuries they had nothing, and even of necessities barely enough for a low existence.

Thus under the Indian methods of getting a living the natural resources which now support over 130 million with a vastly higher standard of living scarcely supplied less than a million aborigines with a wretched existence. The question how the white man achieved this remarkable result is the real subject of our study and it is by way of comparison and contrast with the methods of getting a living first introduced and later developed by the whites that this account of the economic life of the pre-Columbian Indians will prove most instructive.

CHAPTER III

THE EUROPEAN BACKGROUND OF COLONIAL ECONOMIC HISTORY

Introduction. Some knowledge of the economic, political, and social conditions in Europe during our colonial period is essential to an understanding of various factors that vitally shaped the course of economic development in the colonies. In the first place the stage of civilization, economic and cultural, which the people of western Europe had attained at the period of the discovery and settlement of America, not only was an important factor in determining the relations of the settlers to the native red men but it largely determined the type of the social institutions and the form of the economic order which they endeavored to establish in the New World. How the new environment reacted upon these institutions and played a part in molding their later development is one of the interesting problems of our study.

It was a combination of economic, political, and religious conditions in Europe that led to the establishment of the colonies and largely determined the character of the people who migrated to America. Politically the colonies were subject to European countries so that political events in Europe reacted upon them in various ways to a greater degree than would otherwise have been the case. Since the value of the colonies in the estimate of Europe lay chiefly in the advantages to be obtained from a control of their trade and commerce, it resulted in the relations between the colonies and the mother country being especially influenced by economic considerations. In consequence of these conditions there is no other period up to the first World War when events in Europe played so important a part in the course of our economic development as they did during the colonial period and the years immediately following down to 1815.

The Civilization of Western Europe near the Close of the Middle Ages. At the period of Columbus' discovery the people of western Europe enjoyed a civilization that was many, many centuries in development ahead of that of the Indians north of Mexico. The Germanic tribes of northern Europe had advanced beyond the primitive culture of the Indians over a thousand years before; in the Near East the so-called Iron Age had been introduced at least a thousand years before Christ, though the Indians, as we have seen, were still in a Stone Age culture. Although the civilization of western Europe was later in developing than

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that of countries of the Near East and the Mediterranean, it had had the advantage of drawing upon the accumulated knowledge and experience of those older eastern nations and so represented the evolutionary product, not only of many centuries, but of many and varied peoples. Out of that rich inheritance had evolved, through the mingling of peoples and the spread of ideas, the product that forms the basis of western civilization. Its religion had been contributed by the Jews; in literature, philosophy, and art it inherited much from Greece and Rome; in law and political institutions Rome had added to the customs of the early tribes; in science the Arabs had brought their store of knowledge derived in part from still earlier peoples. In fact outside of India and China, whose remarkable early cultural attainments had had little influence in the West and are scarcely appreciated even today, there was almost nothing known about the previous attainments of man a knowledge of which would have contributed appreciably to the civilization of western Europe at this period. Even though the people did not make full use of the knowledge they possessed, it was the most advanced in the world. Thus those who settled America had the great advantage of coming from a region of as advanced a civilization as any other then existing.

If we turn to inquire about their particular achievements, important in economic life yet not used by the Indians, we find a large number. They had the domestic animals such as horses, cattle, sheep, mules, and poultry; they used the metals extensively; they built ships and had considerable knowledge of astronomy and navigation; they had gunpowder, cannon, and guns; they made paper and glass; they enjoyed a written language and printing, a system of calculation, and the beginnings of accounting; there was an extensive division of labor and specialization; their economic relations were subject to the control of a code of laws and an elaborate political organization.

The Underlying Characteristics of the Economic Order Brought to the Colonies from Europe. For the purposes of our study the important thing is to understand the character of the economic order which this civilization had helped to develop in Europe by the time of the discovery and settlement of America. What were the methods of getting a living with which they were familiar and what economic institutions had they created in the process?

First, it is necessary to appreciate certain of the characteristics fundamental to the structure of the economic order. Among the most significant were (1) private property, (2) individual initiative in production, (3) some division of labor or specialization in production, which in turn involved (4) exchange of goods or services, (5) aided by the use of money as a medium of exchange, and resulting in (6) growing interdependence and complexity in the structure of industry; (7) a growing

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influence of competition in determining the value of goods and services; (8) a pecuniary calculation as the basis and chief guide in most economic activities.

These outstanding characteristics of the economic order that the white settlers brought to this country from Europe must be constantly kept in mind since they have continued to be fundamental factors in determining the methods and organization not only of our own economic order but of that of practically all the more civilized nations; the recent efforts of Russia and the totalitarian nations are the most significant attempts to substitute a system in many respects radically different. Though these characteristics have been so fundamental and enduring that we have come to think of them as permanent and almost inevitable, it is to be remembered that they are not unchanging but are constantly subject to a great variety of modifying influences which react upon them in numberless ways while still leaving them as dominant factors in our industrial life. It is in part through the modifications or amplifications of their influence as changing conditions seem to necessitate that the economic order makes progress toward a more complete satisfaction of varied human wants.

With this background of the underlying characteristics of the economic order in mind we can now turn to a brief survey of some of the other features of the mode of getting a living which prevailed in western Europe during the period of colonization. As it was the home of most of the colonists and exercised the greatest influence on the colonies, we can confine this survey largely to England, especially since, in its main features, the economic life of that country was very similar to that prevailing in the other countries of western Europe from which some colonists came.

The Economic Conditions in England around the Close of the Middle Ages. If we turn to a brief survey of the conditions in England as they existed about the fourteenth century, we find the greater portion of the people chiefly occupied with agriculture and working under conditions largely shaped by the institution of feudalism. The population, then numbering around 2 million, lived in small settlements generally called "vills." The ultimate ownership of the land was vested in the king, the church, or the nobility and those who lived and worked on it had to give various dues and services to their overlord. The villeins, as the larger portion of these workers were called, were obliged to give perhaps half of their time to work on the manor of their overlord and were subject to various other feudal obligations. As long as they continued to discharge these obligations, they and their descendants could work on such plots of land as had been assigned to them but, being bound to the land, they were not free to move to other places.

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The land about the vill or manor was divided into woodland, pasture or meadow, and cultivated land. The cultivated land was divided into small strips, usually an acre or less in area, some of which were allowed to lie fallow each year, and the others were put under crops which were varied from year to year. The villein usually had several of these strips of land, perhaps 20 or 30 acres in all, upon which he raised crops when not working upon the fields of his lord; he also enjoyed some rights to the use of the pasture land and woodland. Besides the villeins there was another smaller group known as "cotters" who had little or no land besides the home plot, whose dues to the lord of the manor were less, and who usually sold their labor to the lord or others; they thus constituted a class of hired laborers, or else they followed some craft.

The little group that made up these settlements was subject to the control of the overlord in many ways. He held a court which administered local justice; he owned the mill where the people were obliged to carry their grain to be ground; and such trade with other places as might be carried on was largely under his supervision. However, the little community was largely self-sufficing; the few necessities of life were supplied mostly by the woodlands, the livestock, and the crops, or by such commodities as they could make at home; little was sent out or brought in by way of trade with other places. Thus lived the bulk of the population, a dull, monotonous life, with few of the pleasures that we enjoy and a standard of living that we would consider intolerable, the people narrowly bound down by custom and rigid control—a life almost without change from one generation to another.

There was, however, a small though growing number of the people who lived in the towns and cities and depended chiefly upon industry and trade to get a living. There were comparatively few such places in England at that time, most of them having a population of 2,000 to 5,000, though London had between 25,000 and 50,000. Although many of the inhabitants had garden plots of their own or cultivated the surrounding fields, a considerable group was engaged in carrying on some handicraft or in trade and commerce. Thus specialization and division of labor and the necessary accompaniments of exchange and trade were the outstanding features of this life in contrast to that of the rural districts. Those who entered the handicrafts went through a period of training as apprentices and then became journeymen hiring themselves out to a master craftsman. The master craftsman usually had his shop in his own dwelling and there the journeymen and apprentices worked up the raw materials with the aid of the few simple tools then used, and to this shop the customers came to give their orders or to buy the finished goods in cases where a small stock was kept on hand.

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The more elaborate and detailed social control required in the case of this larger group of individuals, living in the towns in close contact with and dependence upon one another, was chiefly provided by the local government set up under a charter granted by the king or the lord upon whose land the town was located. The town as a unit became responsible for most of such obligations to the feudal lord as remained and more and more these obligations took the form of money payments; thus the individual inhabitants were left with far greater freedom than was enjoyed by those living in the villis.

In fact, as will be seen more clearly later, it was the expansion of industry and trade in the towns with the accompanying increased freedom of the inhabitants that was destined to prove one of the most important factors in the changes in the industrial, political, and social life then taking place.

In the towns those engaged in industry and trade joined together in an association known as the "guild merchant" for the purpose of controlling and protecting their interests. The guild merchant had very extensive powers of control and practically became an important branch of the local government. It determined the conditions under which goods could be bought and sold; traders from other places who were not members could buy and sell only at the time, in the place, under the general regulations, and subject to the tolls that the guild imposed. Thus in numerous ways the freedom of action of the members was limited and the competition of outside traders checked. In addition to its more purely economic functions the guild was also engaged in various charitable and religious activities for the benefit of both its members and the general community. In time, as the towns grew in size and the number of those engaged in a given specialized industry or branch of trade increased, craft guilds, limited to those carrying on a particular trade, were organized; and these exercised in the case of each craft or trade a control similar to that of the guild merchant. Thus they might regulate the hours of labor, the quality and methods of making the product, the conditions under which it was sold, and the conditions under which apprentices and journeymen were employed.

Besides the opportunities for buying and selling afforded by the small shops of the towns there were generally available weekly or semiweekly markets where much of the trade between the town and the surrounding country districts was carried on and where the products of both town and country were offered for sale. In the districts at a considerable distance from any large town or city the larger villages became market towns where this trade centered. Finally, there were the great fairs held once or twice a year, usually on the outskirts of large towns, where traders from all over the country and even from foreign lands brought a

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great variety of goods, many of which were not regularly found in the small markets. It was chiefly through the medium of these fairs that such foreign goods as were used in the rural districts were distributed. There too, the surplus of the staples of the country districts that were not consumed locally, such as wool and hides, was often disposed of, and a considerable wholesale trade developed. These fairs, which were also subject to careful regulation and various tolls, afforded an opportunity to lay in a stock of goods for the coming year and were always occasions for much amusement and pleasure.

To settle disputes that arose in connection with the trade of the fairs special courts were created designed to simplify legal procedure and provide foreigners with an equal standing so as to protect their rights. In these courts the law merchant was accepted, in time being adopted by the regular courts of the trading towns; thus the laws governing trade, particularly those relating to contracts and bills and notes, became a part of the law of the land.

The supply of goods that entered into the foreign trade of England at this period was relatively small. As England was still considerably behind the other countries in western Europe in her economic development, her exports were chiefly such raw materials and foodstuffs as her natural resources best fitted her to produce. Wool was decidedly the most important of these commodities; but hides, leather, tin, lead, and some grain, salt meat, and dairy products were included. The commodities imported into the country included salt, lumber, tar, furs, iron, and fish obtained from the Baltic region; fine textile fabrics of linen or wool from Flanders; wines from several countries; and, mainly through trade with Italy, such products of the Near and Far East as spices, silk, cotton, sugar, dyes, drugs, and precious stones. This foreign trade, like the domestic trade, was subject to extensive regulation under rather centralized control vested by the government in groups or associations of traders in the different cities. Thus the merchants of the Hansa towns of northern Germany had their London warehouses and lodgings in a group of buildings known as the Steelyard and enjoyed their privileges under a grant from the king. English exports, such as wool, were first sent to certain ports of England known as "staples"; through this centralization it was easier to regulate trade and collect such tolls as were imposed.

At this period all trade suffered from a variety of difficulties that tended to restrict it within narrow bounds and lessen the force of competition. (1) Inland transportation facilities were poor and expensive and it seldom paid to carry bulky products of low value any great distance overland. (2) The means of communication were poor. Printing, though long before used in China, did not begin in Europe till 1440 and the spread of information by word of mouth or letter was extremely slow. (3)

Although money was in use, the amount was limited and the varied coinage confusing. Banking methods and a system of credit were further developed in Italy and were slowly being adopted in other countries. Bills of exchange were employed in the foreign trade, but in England there was little accumulated wealth available for loans and no banks so that the king in trying to borrow money was frequently forced to fall back on loans from the merchant bankers of the Continent.

The Economic Organization of Other Countries in Western Europe. In the other nations of western Europe the economic conditions did not differ very greatly from those in England except that trade and industry were considerably more advanced. The masses of the population lived in the country districts, subsisting chiefly by means of agriculture, and were subject to the power of their feudal overlords. Both manufacturing and trading had been developed considerably beyond the stage reached in England, notably in the cities of northern France, Flanders, Italy, and parts of Spain and Germany. Manufacturing was carried on by the handicraft methods on a small scale in individual shops, each requiring but a relatively small amount of capital and owned and managed by the master craftsman. Trade, particularly that between different countries, often required a much larger amount of capital so that individuals commonly joined together in a sort of partnership or united in groups for the purpose of protecting and developing their trading enterprises, each individual carrying on his own trade subject to the general regulations imposed. Thus the most important capitalistic enterprises of the time were commercial in character and trade afforded the greatest economic opportunities for the accumulation of great wealth. The characteristics of modern capitalism began first to appear in the field of commerce.

In the towns and cities that developed on the basis of industry and trade was to be found most of the accumulated wealth of the time, and the economic power which this gave was an important factor in increasing the political power of the trading centers. Though the power of the king and the central government in these countries, Italy and Germany excepted, had been steadily increasing at the expense of the feudal nobility, yet the latter still exercised great influence, and the king in his efforts to bring the nobility under effective control and increase his own power and revenue found a useful ally in the merchant traders of the growing cities. They commanded wealth and, in return for revenues and loans, the king granted them commercial privileges and powers of government; they thus became an important factor in the movement toward nationality or the growth of large and powerful centralized governments.

Bearing in mind this summary of the economic organization of western Europe in the period before the discovery of America and the beginning of modern history, we can now turn to a survey of the changes that

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followed during the succeeding centuries and that make up the European background of our colonial period. Here, as before, more attention will be given to the conditions in England, not only because that country was the home of those early settlers who chiefly shaped our social institutions, but because the colonies, being her political dependencies, found their economic as well as their political life constantly affected by the conditions in the mother country.

European Developments during the Colonial Period. The year 1500 is the most generally accepted date to mark the end of medieval and the beginning of modern history. Thus the history of the white man in the United States is all embraced within that comparatively brief period called modern times. In the preceding section it was pointed out that the steadily growing importance of industry and commerce was one of the most significant factors working toward a change in the economic and political life of medieval times. It was a series of far-reaching events, in many ways closely connected with commerce, that ushered in the period of modern history.

One of the most important and profitable branches of medieval trade had been the commerce with the East, a trade which the Crusades had done much to promote. The commodities entering into this trade, many of which were not otherwise obtainable, came to Europe by various routes, chiefly through the Red Sea, Asia Minor, or the Black Sea. A small portion of this trade passed through Russia to the Hansa merchants who dominated the trade of the Baltic countries, but much the greater portion was controlled by Italian merchants, notably those of Venice and Genoa, through whom the goods were distributed among the nations of western Europe, some being carried overland to Germany and France and some in fleets sailing westward to Spain and then up the Atlantic coast to Flanders and England. As this trade was generally very profitable, the merchants of western Europe desired to secure a share in it but the Italian merchants were so strongly entrenched in their control of the goods coming over the existing trade routes to the Far East that little could be done. Consequently a movement was started to discover a new trade route which would give these western merchants independent access to the riches of the East.

In providing the financial backing for these voyages of discovery the rulers in Spain and Portugal took the lead, though they often employed navigators trained in merchant fleets of the Italian cities. At first the navigators clung closely to the land and slowly pushed their exploration down the west coast of Africa under the lead of Prince Henry the Navigator of Portugal. To leave the land behind and sail straight westward into the terrors of the vast unknown when people still denied that the earth was round required a faith that was not evident until the energy of

Columbus and the resources of Queen Isabella were united and the daring little fleet set forth on the voyage that resulted in the discovery of the New World in 1492. But that it was a new world was not realized at first, for Columbus supposed that he had reached islands lying off the coast of Asia until later voyages showed this to be a mistake. Even after the explorers ascertained that this was indeed a vast continent blocking the way to the treasures of the East, they continued for some two hundred years in their search for a waterway through the continent to the western ocean, thereby greatly hastening the process of exploring and making known the geography and resources of the New World. It remained for the work of man to cut through the mountains and open the Panama Canal in 1914 before the hope of Columbus was finally realized.

Meanwhile Vasco da Gama, sailing around the Cape of Good Hope in 1498, discovered the route to India that was destined to be the one most used for several centuries; the only available route to the westward was made known when the ship of Magellan, sailing around Cape Horn, completed the first voyage around the world in 1522. Before this the extension of the conquests of the Ottoman Turks in the Levant, culminating in their capture of Constantinople, the capital of the Eastern Empire, in 1453, had placed them in control of the old trade routes. Since the Italian merchants found it increasingly difficult to obtain supplies from the Far East through this source, the control of this rich trade passed to the merchants of western Europe, at first to those of Portugal, and the commercial development of these nations was greatly stimulated thereby.

Although easy access to the trade of the Spice Islands and the far-famed wealth of Cathay was not discovered by the Spanish explorers of the New World, they soon found in the rich stores of silver and gold in the mines and treasure houses of Mexico and Peru an even greater source of wealth than the trade of the Indies. The great stream of the precious metals that poured forth from these sources had an important influence upon conditions in Europe, and the greatly exaggerated notions about the variety and richness of the resources of the New World aroused the jealousy of other nations and soon led to a keen struggle to get possession of these new lands. But before describing that struggle we must turn back to other events in Europe.

The fall of the Eastern Empire was also a factor in bringing about other consequences which were destined to exercise an influence on colonial history. The great group of scholars who at that time fled from Constantinople to Italy helped to stimulate the growing interest in science, art, and philosophy that developed into the revival of learning and interest in humanity that ushered in the Renaissance. The growth of printing in the last half of the fifteenth century was also a factor in the

spread of knowledge, the importance of which can scarcely be exaggerated. The intellectual awakening and spirit of inquiry aroused were reflected in religious matters as well. In 1517 Martin Luther nailed his theses to the door of the church in Wittenberg and initiated the movement known as the Reformation, which plunged Europe into a century and a half of religious struggles, not only between Catholics and Protestants but between different sects among the Protestants, with consequences that shook dynasties and nations and brought widespread religious persecution and human suffering. These religious conflicts played a part in the struggle for colonies, as well as in the shaping of emigration to the New World; in turn they were further reflected in the life of the colonies.

Economic Changes. Meanwhile economic changes of importance were taking place. The great inflow of the precious metals from America soon spread throughout western Europe and the increased quantity of money brought about a rapid advance in prices in the course of the sixteenth and early seventeenth centuries. The period of rising prices tended to increase the profits in industry and trade and thus stimulated activity in these fields. At the same time, since wages did not rise so rapidly as prices, discontent spread among the working classes because the amount of goods which they could purchase with their earnings was decreased. This resulted, as is apt to be the case under such circumstances, in various social uprisings which tended to improve the condition and increase the freedom of the poorer classes. A similar result followed when people took advantage of the increased supply of money to purchase exemption from personal services and other obligations such as still survived from feudal times, thus further undermining the restrictions upon individual freedom and initiative.

Another economic development of this period, destined to prove of marked importance from the point of view of its influence on the colonies, was the change taking place in the character and methods of foreign commerce. The discovery of the New World and of the ocean route to the Far East, together with improved methods of navigation, led commerce to abandon the old routes that stuck closely to coast lines and the inland seas, and sail forth over the oceans. Moreover, as has been noted, much of the control of this commerce passed from the small Italian city states to nations bordering on the Atlantic—Spain, Portugal, France, the Low Countries, and England—and their city ports became the leading commercial centers of this trade.

In all of these countries the spirit of nationality had been rapidly developing and the power of the king and the central government greatly increased. In consequence the governments, seeing in the growth of trade prospects for greater revenue, began to take a more active part in foster-

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ing and developing the country's trade. Instead of a rivalry between groups of individual trading cities, backed and controlled by the merchant associations and enjoying little aid from the central government, the trade rivalry now became a national affair and the resources of the state were employed to a much greater extent than formerly to protect and augment its commerce with the world. In consequence, as religious motives played a less important part in the international rivalries of Europe after the end of the Thirty Years' War in 1648, commercial and economic motives became more and more influential as a factor and found expression in what is known as the "Mercantile System," the principles of which we shall examine shortly.

When commerce took to the oceans and began to make long voyages to distant lands and carry on a trade more extensive than ever before, important changes in its organization took place. Such trade necessitated the use of a larger amount of capital than previously; commerce became still more capitalistic in character. This distant trade required the establishment of agencies, or "factories" as they were called, in far-off lands where the products of those countries were gathered together for the ships that came to get them. The larger amounts of goods traded in and the longer periods of time elapsing between the purchase and sale also increased the capital investment required. Further, the keen rivalry between the traders of different nations, the danger of attack from the numerous pirates, and the frequent wars necessitated extensive facilities and a large outlay for purposes of defense. These were things beyond the means and power of individuals or small groups of traders to provide; they required great resources and a large, permanent, and centralized organization if the operations were to be carried on with success. To supply these needs there gradually evolved the great trading companies which, from the middle of the sixteenth century on, came into control of much of the overseas trade of the nations of western Europe. The form of business organization that was eventually developed was the prototype of our modern corporation with its advantages of permanence, centralized control, and shares which could be bought and sold in large or small amounts and ordinarily involved no liability for the debts beyond the original investment. In this way the capital of a large number of people could be secured to carry on the enterprise.

At the same time the power and resources of these trading companies were augmented by the aid of the state. From the royal authority they received charters which granted them extensive privileges and control over trade as well as powers of government over the settlements they established. The more usual custom was to grant the company a monopoly of the trade within certain specified areas. In this way it was easier to control or regulate the company and to collect such dues as were

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imposed. Also, only in this way could adequate protection be given to those who invested their capital in these enterprises; for it was obvious that, after the company had spent large sums in erecting agencies or in developing and protecting trade, if outsiders who had contributed nothing to this outlay were allowed to come in, compete for, and share freely in the trade thus opened up, there would be little chance that the company would be able to obtain any return on the heavy outlay which it had incurred.

The extent to which the government aided and controlled these companies varied considerably and depended largely on the resources and power possessed by the king. In some countries this was very great; in Spain the government itself directly controlled most of this trade and in France the intermediary companies depended largely upon government money and aid. In England, on the other hand, where the financial resources and the power of the king were more limited, private initiative and capital were relied on almost exclusively, and the government did little more than furnish encouragement, grants of power, and some protection.

In this way originated the different companies trading with the Baltic lands, the Levant, the Guinea coast, the Far East, and America, of which the British East India Company was the leading example. It was the effort of similar companies to develop trade with America that led to the founding of the first permanent colonies.

England during the Colonial Period. We may now turn to inquire more specifically how the changes of this period altered the economic conditions in England. In the years 1348 and 1349 the bubonic plague, or Black Death, swept over much of the country; starting in the Southwest and spreading to the Northeast, it carried off nearly half the population in the regions affected. A great scarcity of labor resulted and in spite of the effort to keep wages down by statutory enactment and to hold the villeins to the land many laborers succeeded in improving their position and loosening the shackles that bound them, a movement which received an additional impetus through the Peasants' Rebellion of 1381. As a result, by the middle of the following century, the greater portion of the rural population had secured freedom from personal services. In the next century appeared a widespread tendency to turn the small fields of the manors into large tracts used for raising sheep instead of crops, known as the enclosure movement and leading to an exodus of agricultural workers to the towns and a further decline in the manorial system. Meanwhile, the internal strife marked by the War of the Roses in the second half of the fifteenth century had ended with the accession of the Tudors to the throne, beginning with Henry VII in 1485, which was accompanied by a marked increase in the power of the king and central

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government. This was reflected in the famous Statute of Apprentices of 1563 which regulated the relations between masters and journeymen, fixed the rules of apprenticeship, restricted the power of the guilds in various ways, and continued the policy of regulating wages, thus providing precedents subsequently followed in the colonies. In the sixteenth century the disturbances connected with the Reformation spread to England; Henry VIII broke with the Catholic Church and the Church of England was finally established. Various dissenting Protestant denominations, notably the Calvinists, appeared upon the scene and, in the face of constant repression and persecution, kept up the struggle for freedom of worship.

The seventeenth century saw marked changes in the form of government as a result of struggles that had an important influence upon the colonies. The royal power built up under the Tudors was used in more autocratic and corrupt ways when the Stuarts succeeded to the throne with James I in 1603. Meanwhile the steadily increasing population of the towns and cities, where there was a marked growth in the middle and working classes among which were found most of the religious dissenters, became more restless as well as more powerful. Civil War broke out in 1642; Charles I was beheaded and Cromwell's Commonwealth was established, only to be followed by the restoration of the Stuarts under Charles II in 1660. But the rule of the restored Stuart kings became even more intolerable and finally led to the Revolution of 1688 and the accession of William and Mary to the throne under the terms of the Declaration of Rights, which greatly increased the power of Parliament at the expense of the royal authority and marked another step forward in the rising power of the people and the growth of democracy.

Along with the changes in agriculture, important developments were taking place in the field of industry and trade. A larger and larger number of people were engaged in the various handicrafts in the towns and cities. In time a stage was reached where not all the workers could look forward with assurance to passing through the stages of apprentice and journeyman to become a master craftsman with a shop of their own; for many never got beyond the position of the journeyman, partly owing to the obstacles put in their way by the masters, and thus were destined to remain hired workers for life. When this group became considerable, they united in journeymen associations to protect their interest against the master craftsmen and to secure for themselves some of the benefits similar to those which the craft guilds provided for their members. This marks a further step toward division of labor and a growing separation between workers and employers.

Various changes occurred tending to undermine the power of the craft guilds. New industries arose not enjoying the privileges or subject

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to the control of the old guilds. Artisans entering a trade and wishing to be free from the regulations of the guilds set up their shops outside the town limits where they enjoyed greater freedom, while the government began to curtail the privileges of the guilds, many of which had been abused in the desire to obtain a monopoly in the local markets. From the sixteenth century on, the power of the guilds steadily waned. But industry continued to expand, stimulated in the sixteenth century by the rapid rise in prices, in the seventeenth by the influx of many skilled workers from France, Germany, and the Low Countries seeking to escape religious persecution or the ravages of war, and throughout by the steadily expanding markets, not only at home but also abroad, for England had now become an important exporter of finished products rather than of raw materials.

Although there were relatively few inventions or improvements of far-reaching importance in the type of tools or machines used until after the middle of the eighteenth century, still the few innovations made, combined with the growth in volume of the output, helped to bring in some changes in the organization of the trades and to develop what became known as the domestic system of industry. Many craftsmen continued to carry on production in small shops in their homes employing only a few apprentices and journeymen and selling the product themselves; others, operating on a larger scale, bought the raw materials and distributed them among laborers who worked them up in their own homes, returned the finished product to the employer, and received wages for their work. Sometimes, where the necessary tools or machines were expensive, the employer supplied these as well as the raw materials. The employer, thus securing a large stock of goods, often carried on what might be called a wholesale trade as well as making smaller retail sales direct to consumers. This of course required considerably more capital and led to the growth of a class of so-called merchant-capitalist employers.

In the eighteenth century there were also a few cases, notably in the stocking and silk manufacture where the equipment used was quite expensive, in which the employer had a fairly large building where he set up a number of machines and where workers came from their homes and worked together under one roof. This had the advantage of making possible more careful supervision of the work and some reduction in cost; but the laborers generally preferred the greater freedom enjoyed when the work was done in their homes and at such times as they chose. This may be considered the first step towards the introduction of the factory system of manufacturing; but the factory did not become common until the last of the eighteenth century after the great inventions and the introduction of power-driven machinery, when the economic advantages of the system became so great as to drive out most of the shops

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carried on under the domestic system. This change was made so rapidly in the period from 1770 to 1830 and was so wide-sweeping in its effects that it has become known as the Industrial Revolution and is considered to mark the real advent of industrial capitalism.

Along with the growth of manufacturing and commerce came developments in financial methods and institutions. Larger amounts of capital than ever before were being used in business enterprises; it was also necessary to provide means for facilitating the accumulation and lending of capital as well as for the financial operations arising out of the larger quantity of economic goods being bought and sold. The increased supply of capital was provided through the growth in the accumulated wealth of the country; that portion which was not used for living expenses or lost through the wastes of war and in other ways was being saved and used as capital either by the owner or by others who borrowed it of him and paid interest for its use.

In the Middle Ages when but little capital had been used in business enterprises, most borrowing had been for personal needs rather than for business purposes and the teachings of the Church had held that it was an un-Christianlike practice to take advantage of an individual's needs by charging interest for loans so made. Thus the charging of interest had generally been prohibited both by the Church and by civil statute. But with the growing opportunities to use capital in industry and commerce for the purpose of making money the old opposition to the charging of interest on borrowed funds was slowly broken down, in the case of England under the lead of the Protestants, during the sixteenth century, and the payment of a reasonable rate was sanctioned. What were deemed extortionate or usurious rates have very generally continued under the ban of the law down to the present.

In earlier times the merchant traders of the Continent had been one of the chief sources from which borrowed funds were obtained; later a similar class developed in England. At the same time, with the growth of trade and the increased amount of money in circulation, the money-changers became more important. As both they and the goldsmiths had to have a place of safekeeping for their money, other people adopted the habit of depositing money with them so that they often had considerable sums on hand. Then people began to go to them to borrow money and, as few depositors wanted their money back at a given time, the money-changers were in a position to lend a portion of the deposits, charging interest for its use. As this proved profitable, the money-changers began to induce more people to deposit with them and instead of charging for the safekeeping of deposits, as had often been done at the start, they began to offer interest on deposits, making their expenses and profit by the difference between the rate of interest paid and that

received. These practices gave an added stimulus to saving, thus tending to increase the supply of capital. At the same time, by providing facilities for those who could not profitably use their savings to lend this capital to those who could so use it, they tended to make capital flow into the most productive channels and thereby increased the wealth-producing power of the country.

The moneylenders also began to get a profit by using their own credit which was loaned in the form of notes that often became a part of the money in circulation. In this way banking developed, performing the functions of lending, accepting deposits, and issuing notes. As capital grew in importance among the factors of production, the functions and influence of bankers increased. These developments in the field of banking started in Italy and Spain, later spread to the trading cities of Germany, France, and the Low Countries and still later to England where the first bank, the Bank of England, was chartered in 1694.

Even more noteworthy than the growth of England's manufactures during these centuries was the expansion of her foreign commerce. Up to the latter part of the Middle Ages the foreign trade of England had been relatively small, the exports consisting chiefly of raw materials and some foodstuffs and the imports of fine cloth, wines, and products of the East, for the most part luxuries little used by the mass of the people. The country was still essentially a self-sufficing economic unit and such foreign trade as existed was largely in the hands of foreigners. But as trade expanded and English merchants accumulated capital and experience, they were not content to let the merchants of the Flemish, Italian, and Hansa cities monopolize their foreign trade. Beginning in the fourteenth century and following the common practice of joining together for mutual protection and aid, the first group that entered foreign trade were the Merchants of the Staple who carried England's chief export, wool, to the cities of Flanders and northern France. Later as England developed an extensive manufacture of woolen cloth another group of exporters known as the Merchant Adventurers, starting in the fifteenth century with an establishment at Antwerp but later extending their activities to other places, contributed to the rapid expansion of the trade of that and the following century. From among the group of Merchant Adventurers came those who, in the rise of overseas commerce following the great discoveries, helped to organize in the second half of the sixteenth century such great companies as those trading to Russia, the Levant, and India; finally the London Company, whose efforts to develop trade with America led to the founding of the first permanent English colony.

As England's population grew, reaching over 5 million in the seventeenth century and 10 million in the British Isles by 1750, and her

manufactures and foreign trade expanded, her exports of raw materials declined and she turned to manufactured products, her great staple wool being exported almost entirely in the form of manufactured cloth after 1600. Exports of grain, varying with the harvest and aided by a bounty, were fairly regular until about 1765 when imports to feed the growing population began to exceed exports. England's imports, though still including fine cloth, wines, and many products of the East, began also to consist of many raw materials for her manufactures and the growing fleet of merchant shipping and occasionally, in periods of scarcity, of foodstuffs.

Throughout this period, particularly from the middle of the sixteenth century, the sovereign and Parliament began to take a more active interest in the development of foreign commerce. With the growing spirit of nationality and backed by a stronger government, England, having by this time driven the Italian and most of the Hansa merchants from her ports, entered into active competition with Spain, France, and Holland for the overseas trade of the world; the advancement of commerce became a national affair and resolved itself into a struggle for colonial empire, a game in which the American colonies on the Continent began to play a rather humble part. In this struggle the economic policy that governed the action of England, as of the other nations, was the Mercantile System previously alluded to. As this policy was destined to play an important part in the political and economic history of the colonies, we now turn to examine it in more detail.

The Mercantile System and the Colonies. Mercantilism, though commonly spoken of as a system, was neither a clearly defined set of precepts nor a logically coherent theoretical system. Its supporters varied greatly as between different periods and different countries concerning the particular measures that should be adopted, and private interests as much as public often lay back of their action. Other objectives besides the economic were often involved and the measures actually adopted were apt to reflect an effort to meet the problems of the day in a pragmatic manner. Still there is enough that was common in the statements of objectives and in the measures adopted to justify a generalized summary of the leading features of the system.

Mercantilism had as its main objective the building up of the power and strength of the nation through economic means. It was chiefly a product of the growing spirit of nationality and the increased power of the central governments which was so marked a feature in the political life of the nations of western Europe at this period. The king or central government was now trying to do for the nation many of the things that the strong trading cities had sought to accomplish in building up their trade in earlier periods before the central government had attained

great power. But mercantilism was also in part a product of the mounting power of the growing accumulations of capital and wealth. There was an increasing recognition of the fact that the nation, as well as the individual, that had command over great economic resources had a marked advantage in the keen national rivalries of the time in the field of war as well as in that of industry and commerce. Besides, the growing activities and power of the central government required larger revenues. Personal service such as the feudal lords and their retainers had rendered was insufficient; money was essential, and only through stimulating the economic activities of the country could the needed revenue be easily obtained.

Similarly in war, whereas mere man power and strength of numbers had been the chief factors in the outcome under earlier methods of fighting, now the introduction of gunpowder and firearms and the maintenance of standing armies and large navies, with all the increased equipment which these involved, necessitated a much greater relative use of economic resources along with man power if a nation hoped to survive in the steadily increasing scale of operations that marked the almost constant warfare of the time. In fact this growing dependence on economic resources in war, as well as in most other forms of human activity, has been increasing ever since, as was so clearly brought out in the first World War.

In the effort to strengthen the power of the nation through increasing its economic resources and wealth the mercantilists attached especial importance to certain things. One was the accumulation of a large quantity of money in the country, in the belief that a great store of the precious metals was a particularly important asset in time of war, especially under the conditions then existing when credit facilities were poorly developed and international borrowing was more difficult than today. There was also a belief, far less justified, that, in general, money was a particularly desirable form of wealth as compared with most commodities, a belief partly due to ignorance of the principles of money and international trade. Where a country did not possess mines yielding the precious metals, the chief method of obtaining money was through trade. When a country sold goods or services to other countries the value of which was greater than the value of the things bought from them, money was brought in to settle the balance of indebtedness. Where such a situation existed, it was called a favorable balance of trade; when the situation was reversed so that imports exceeded exports and money went out, it was called an unfavorable balance. The mercantile policy hence sought to favor all trade with countries that showed a favorable balance and to restrict the trade that was unfavorable or change it so as to make the balance a favorable one.

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In consequence there developed a great mass of legislation designed to restrict or prohibit the export of money, to check imports from countries where the trade balance was unfavorable, and to increase exports. Sometimes, as in the case of England's trade with India which showed an unfavorable balance, the objection raised was overcome if it could be shown that the imports from such a country were later re-exported and so helped to create a favorable balance in the trade with another country; then the ultimate result might be a gain in specie as well as in the profits of the trade. It was a favorable balance in the total of transactions with all countries, rather than in those with any single country, that was the primary concern.

A second point which the mercantilists emphasized was the building of a large merchant marine. This would obviate the necessity of paying shipping charges to foreign shipowners and so lessen the likelihood of money flowing out of the country; at the same time, if native shipping were employed by foreigners, it might bring money in. Also the merchant marine would help to train up a large body of sailors and provide auxiliary ships that would be of aid in strengthening the navy in time of war. In carrying out this purpose various regulations were used tending to confine much of the carrying trade of the different countries to their own shipping through the exclusion of foreign ships.

A third objective of mercantilism was to develop domestic industry and provide full employment for labor by keeping rival foreign goods out of the home market and by creating as wide a market as possible for domestic goods in other countries. Also, where necessary, it was their purpose to facilitate the securing of an abundant supply of the requisite raw materials either at home or abroad. This was accomplished by checking the export of domestic raw materials and by securing colonies or else a favorable trade arrangement with other countries that produced the raw materials desired.

A fourth objective was to produce at home a sufficient quantity of such foodstuffs as the country was capable of growing so that it would not be dependent upon foreign sources of supply, particularly in time of war. Protective duties tending to keep up prices and stimulate production were employed to accomplish this purpose.

It may be pointed out, finally, that the combined tendency of these different objectives was to make a country economically self-sufficing and independent, producing as much as possible in the way of raw materials, foodstuffs, and manufactures within its own dominions, carrying its own trade and excluding rival foreign products from its markets, yet still trying to sell as much of its own products as it could in other countries. Also, as put into practice, this policy involved an extensive system of government control and regulation, for it was based on the

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belief that individuals if left free to follow their own interest would frequently engage in lines of activity that might injure the economic interests of the nation. Freedom of individual initiative and competition in foreign trade were therefore seriously circumscribed under this system.

From this brief survey of the objectives of mercantilism it will at once be clear that the possession of colonies would be of very great aid in furthering their attainment. Colonies might possess natural resources such that they could supply products which the mother country could not produce, in which case it would not be necessary to buy these commodities from foreign countries; also, the colonies might possess mines yielding the precious metals; the markets of the colonies would afford an additional outlet for home manufactures; the control of colonial trade would yield additional profits to the merchants and give increased opportunity for expansion of the merchant marine; any surplus population could find an outlet in the colonies and so still remain under the political control of the mother country instead of settling in some foreign land. All of these would help to keep money in the country, increase the profits of industry and trade, augment the national revenue, and make the nation more nearly economically self-sufficing and independent.

The Struggle for Colonies. It was these ideals of the Mercantile System, combined with the great opportunities that came with the discovery of the New World and the opening up of direct trade with the Far East, that led to the keen struggle for colonial empires among the nations of western Europe beginning with the sixteenth century, an economic and political rivalry which has continued down to the present day. Though somewhat abated after the end of the Napoleonic wars, the last sixty years have witnessed a revival, sometimes called neo-mercantilism, and we can see in the events of this period and the forces that helped to bring on the first World War, as well as in the intensified spirit of nationalism in its aftermath and in certain objectives of the totalitarian states, many of the policies and motives that underlay the old Mercantile System of earlier centuries. The present-day international contests over the oil, coal, and iron-ore resources of the world, the efforts to build up a large merchant marine, and the revival of protectionism are but a few illustrations of movements which, although often originating in the desire for private gain, are urged and make their appeal to the people of a country on the ground of building up the economic power of that nation.

It was the struggle for colonial empire that thus arose among the nations of western Europe in the sixteenth century and continued throughout the colonial period that played an important part in the political and economic history of the American colonies. As the colonial empire of the different nations attained increased importance, the

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effort to ensure some balance between them became, especially in the eighteenth century, a factor in the struggle over the balance of power in Europe. In the course of this rivalry we see first one nation and then another rising to a position of dominance, the success of each arousing the jealousy of the others who ravaged the commerce, seized the colonies, and tried to build up a colonial empire of their own on the spoils.

In the sixteenth century this supremacy fell to Spain and Portugal. The explorers from these countries had been the first to discover the New World and the ocean route to the Far East. In 1493 the Pope, Alexander VI, had divided the new discoveries between them, Spain getting the western portion including the Americas, except most of Brazil, and extending in the Pacific to include the Philippines; while Portugal got the eastern portion including Brazil, the western and southern coasts of Africa, settlements in India, and the East Indies. Spain, with a population of around 7,000,000 in 1500, reached the zenith of her power under Charles V, 1516-1556, and Philip II, 1556-1598, and Portugal was united with her during the period 1581-1640. In America the conquests and explorations of the Spaniards were rapidly extended. The southern portion of the United States was explored from coast to coast but, yielding no precious metals, received little attention, though the first permanent white settlement in the United States, Saint Augustine, was founded in 1585 and Santa Fe in 1609. Mexico was subdued by 1521 and Peru by 1532 and the gold and silver from the rich treasure stores and mines thus obtained when carried back to Europe resulted in an enormous rise in prices, one of the most important reactions of America on the Old World during the sixteenth century, and aroused the jealousy of the world.

That Spain was not invincible was shown when little Holland declared her independence in 1581 and the great Armada sent forth to subdue England was destroyed in 1588, while the English sea rovers continued to ravage the rich ports and treasure ships of the Spanish Main. Thereafter the prestige and power of Spain declined at a rapid rate. An inefficient economic system, domestic and colonial, combined with the waste of endless wars undermined her economic resources and her political strength, despite the continued though smaller inflow of the precious metals from her colonies. Portugal regained her independence from Spain in 1640 and Holland secured the recognition of hers in 1648. In the New World, despite all her efforts to keep other nations out of her possessions and their trade, Spain was forced to yield one concession after another as her power steadily dwindled before the attacks of other nations and the competition of their traders.

Holland was the next nation to attain great commercial power; during the first three quarters of the seventeenth century her fleets

dominated the commerce of western Europe. Through a long series of wars she secured the most valued of the colonial possessions of Portugal while that country was subject to Spain: the Cape of Good Hope (Cape Colony), Ceylon, the East Indies, and trading posts in Africa, India, and the Malay Peninsula, thus giving her command of the Far Eastern trade and a share in the slave trade. She obtained a share in the trade of the New World by wresting some of the West Indies from Spain, temporarily seizing Brazil, and establishing her colony of New Netherlands on the mainland. The success of Holland was the marvel of Europe; her ships seemed to be everywhere; in the Baltic trade, the fisheries of the North Sea, the slave trade of the Guinea Coast, the rich trade of the Far East, and much of the trade of North America her merchant fleet was supreme and Amsterdam was the financial center of Europe. But the resources of the little nation were scarcely sufficient to enable her to cope successfully with her stronger neighbors, England and France, whose envy she aroused and who began about the middle of the seventeenth century a series of commercial restrictions and wars which seriously impaired her trading and maritime supremacy.

The succeeding period including the second half of the seventeenth and the eighteenth century was marked by the struggle, for commerce and colonies, that broke out between England and France. Each country endeavored to build up its merchant marine and to exclude the Dutch from its carrying trade; each country made war upon Holland, England securing New Netherlands, and France, the settlements in India. At the same time each was extending its possessions in America, partly through settlement and claims based on early discoveries and partly through conquests of some of the Spanish islands in the West Indies. Then, Holland having been weakened, England and France turned upon one another. France under Louis XIV, 1643-1715, with about 20 million inhabitants, had become the most powerful nation in western Europe; but the steadily growing power of England, particularly on the sea, provided a dangerous rival. To prevent France from acquiring Spanish possessions England had entered the War of the Spanish Succession and in the Peace of Utrecht, which ended this war in 1713, England secured Acadia, Newfoundland, and the Hudson Bay region. Later, when the struggle came to a climax in the Seven Years' War, 1756-1763, it resulted in a great victory for England. The French were practically driven from India and British power was first firmly established there; in America France lost all her possessions on the continent, Canada going to England and Louisiana to Spain, and Spain turned the Floridas over to England. Thus the English colonies were finally relieved of the fear of France, a menace which had constantly hemmed them in and threatened them as long as the French held Canada and the valley of the Mississippi.

It must be emphasized, however, that in this long struggle the colonies on the mainland of North America played a relatively unimportant part. Looking at them from a point of view shaped by present-day conditions, we are apt grossly to exaggerate their value as estimated by the nations of Europe at that period. From the European point of view control of the trade with India, with the Spice Islands of the Far East, with the gold- and silver-producing countries of Mexico and Peru, or with the sugar islands of the West Indies was a far more valuable possession than that of the thirteen colonies on the mainland. This attitude is well illustrated by the fact that France attached almost no value to the rich resources of her vast Louisiana domain and, in 1760, England was uncertain whether in the prospective treaty of peace with France it would be better for her to retain Canada or the little island of Guadeloupe in the West Indies. Benjamin Franklin was doing his best to persuade the statesmen of Great Britain that the French possessions in Canada were really the more valuable. Although, of course, the thirteen colonies were much more valuable than Canada and the rapid growth of their commerce during the eighteenth century greatly altered English opinion as to their desirability, it must be emphasized that in the colonial period as a whole their relative importance among the colonial possessions of the time was in the estimate of Europe far below that which we, looking at them from the point of view of Americans and in the light of subsequent development, are likely to assume.

The reason for this attitude is found in the objectives of the Mercantile System and the desire to build up an empire that should be economically self-sufficing. With that ideal in view it is obvious that countries like England and France, in the temperate zone, would particularly desire colonies located in the tropics and possessing natural resources and products such as they lacked. Thus the West Indian islands growing sugar, coffee, cotton, tobacco, cacao, and various dye woods provided commodities not produced in the mother country, commodities that would have to be bought from foreign countries if not supplied by her own colonies. Also, since these colonies needed but did not produce many agricultural products and manufactures available in the mother country, their market provided an additional outlet for such goods. On the other hand, the colonies on the mainland in the temperate zone produced much the same things as did England. This was less true of the Southern colonies with their tobacco, rice, indigo, and naval stores but even these did not rival in importance the tropical products of the West Indies; the Northern colonies, aside from furs, fish, and lumber for shipping, yielded little that England did not herself produce. Even such manufactures as they developed tended only to displace English products.

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It was not till near the middle of the eighteenth century that the growing population of the mainland colonies began to prove a far better market for British goods than England's colonies in the West Indies. Thus the way in which the tropical colonies fitted in with England's economy and helped to round out her economic self-sufficiency instead of duplicating and rivaling her products, as did the Northern colonies, does much to explain the European estimate of the significance of the thirteen colonies.

Had any of the nations of Europe, engaged in this struggle for colonial empire in the seventeenth and eighteenth centuries, had the slightest conception of what the course of developments in the nineteenth century was to bring about, the fate of the thirteen colonies might have been very different. But this is only one of the innumerable lessons of history showing how vital and fundamental a factor in the fate of nations some attempt to study and understand future development, supremely difficult as it is, may prove to be. How many statesmen of today, we are tempted to ask, are seriously inquiring what the developments of the next hundred years are likely to be, or the probable position of the United States in the world of the twenty-first century, and what action today will further the prospect of advancing the well-being of American people at that time? No final answer is possible; yet a nation which is content merely to try and work out the problems of the moment in the light of immediate conditions and needs, lacking that imaginative insight into the future which the study of history in its broadest aspects can do so much to provide, is simply gambling with the fates.

CHAPTER IV

THE FOUNDING OF THE COLONIES AND THE GROWTH OF POPULATION

The Groups and Motives Promoting Settlement. In the movement that led to the establishment of the colonies we may distinguish three separate groups whose activities contributed to the results: (1) the government; (2) the people who migrated to the colonies; (3) the trading companies or proprietors who promoted and financed the enterprises. In the case of each group varied motives were back of their action though the most prominent were religious, political, or economic in character.

In the case of the government, religious motives played a minor part but were not without influence. The prospect of converting the savages to Christianity made its appeal to many, and in the keen rivalry between Protestants and Catholics the establishment of one or the other faith in the colonies was regarded as so much strength gained. Furthermore, the close connection between the Church and the state at this period tended to increase this influence. The motive was most prominent before the eighteenth century and played a greater part in Spain and France than in England. Vastly more influential in the action of the state were the economic and political motives. As was explained in the preceding chapter, the economic advantages to be obtained through the possession of colonies were regarded as one of the important means for increasing the revenue of the government, augmenting the wealth of the nation, and thereby adding to its political power and prestige. Once the settlements were established, the colonial authorities also took an active interest in attracting immigrants.

Similarly varied motives influenced the people who migrated to the colonies. The religious motive was most marked in the case of those who came during the seventeenth century before the persecutions aroused during the struggles of the Reformation had subsided. This was reflected in the Puritan exodus to New England before 1640, the movement of churchmen to Virginia during the Protectorate, the later influx of Quakers into Pennsylvania and elsewhere, the Huguenots who fled from France after the revocation of the Edict of Nantes in 1685, the Lutherans, Mennonites, and Moravians of Germany seeking to escape religious persecution and the ravages of war in the early years of the eighteenth century, and the Scotch-Irish desiring to flee from similar troubles in Ireland.

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The wish to escape from purely political persecution was a relatively unimportant factor as far as most of the immigrants were concerned, being most marked in the case of those who sought refuge in Maryland and Virginia during the period of Cromwell's Protectorate.

Economic motives, though often combined with the others, were doubtless the dominant ones in the case of the vast majority of those who of their own free will came to settle in the colonies, particularly during the eighteenth century. Some came in the spirit of restlessness and adventure hoping to win an easy fortune, though generally destined to disappointment; others who were in debt or had met with failure thought to get a new start. Because practically all America in those days, as ever since, held out the prospect of greater economic as well as religious and political freedom, the hope of bettering their material conditions was the dominant influence in inducing them to meet the expense, the hardships, the loss of home ties, and other difficulties incident to migration to the New World. Even in the case of those who came through force—the slaves, the kidnaped, the criminals, and the paupers—economic motives, the need of cheap labor, and the desire to lessen the burden of public support of jails and poorhouses, dominated.

In the case of the third group, those engaged in the promotion and financing of colonial settlements, the economic motive was perhaps even more influential, though religious, political, and even philanthropic ideals were sometimes in evidence. In the case of Spain the state itself supplied most of the funds required for the establishment and maintenance of her colonies and exercised a direct and autocratic control. In France and Holland intermediary trading companies were more generally used, though they were closely associated with the government and, in the case of France, received large money grants from that source. In England, on the other hand, the government did little more than make land grants and afford protection and encouragement, except in the case of Georgia; the supplying of funds and initiative was left almost entirely to private enterprise, which was given much greater freedom of action than in the other countries. This private enterprise that promoted the establishment of the English colonies took two main forms: (1) the trading company, chiefly interested in making profits through the development of trade, and (2) the proprietors who received large grants of land from the king and hoped to obtain a large income by building up great landed estates with many of the rights of a feudal domain.

The first permanent English settlements, those in Virginia and Massachusetts, were promoted by the trading companies; an earlier attempt under Raleigh, who had a proprietary grant and tried to establish a colony in North Carolina in 1585, as well as others, had failed through

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bad management and lack of resources. These companies were modeled on the type of the trading companies which we have seen were carrying on much of the overseas trade of England at this time. They were essentially business enterprises organized as joint stock companies and designed to secure profits by way of trade; they hoped also to find gold and silver and a route to the East Indies. But in such undertakings these enterprises faced a very different situation from that enjoyed by the companies trading with Russia, Turkey, or the Indies. The latter were trading with countries already having a large population and a fairly advanced civilization and producing a great variety of products that England wanted, so that all the companies had to do was to establish an agency where these products could be brought together and send their ships to get them.

In the English colonies on the American mainland, on the other hand, a trading company found a sparse population of Indians who had done almost nothing to develop the resources of the country and, except for furs, offered nothing for trade that the company wanted. Nor did they succeed in discovering rich mines of the precious metals such as had contributed so much to the success of the Spanish colonies. Hence it was obvious that if these companies were to make a success of their enterprise they would have to bring over settlers to develop the resources of the region and create the products by means of which trade could be carried on and the profits of the undertaking assured. Though trade was the chief objective, settlements had first to be established; the trading companies were thus forced to devote their attention and resources to colonization. It is as providing the business organization and financial backing that made possible the establishment of the first permanent settlements that their activities are chiefly significant from the economic point of view. For the establishment of these settlements in the wilderness among Indians, often hostile, and in an unknown environment was not only a difficult undertaking but one that required large financial resources. Without such financial backing there was little likelihood of success.

The Settlement at Jamestown. In 1606 King James issued the Virginia Charter providing for two joint stock companies: the London Company receiving a grant of the land between the 34th and 38th parallels of north latitude and the Plymouth Company the land between the 41st and 45th parallels, the intervening region being open to either. These grants declared that the colonists were to enjoy the same "liberties, franchises, and immunities" as the people in England and later charters included powers of government and a monopoly of the trade in these regions, as was common with the trading companies of the time. The companies' stock was sold to the public, nobles, government officials, and merchants subscribing; the funds were then invested in ships, sup-

plies, and other things necessary for the establishment of a settlement and a group of settlers enlisted for the expedition.

The Plymouth Company sent over its ships in 1607 and made a settlement at Sagadahoc on the Kennebec River in Maine. But the management was inefficient and the people brought over proved to be not of the type required to undergo the hardships involved. The agriculture necessary to provide food was neglected while they hunted for gold; they thoughtlessly incurred the hostility of the Indians and after a severe winter the survivors abandoned the settlement and returned to England. The Company continued with little success as a trading enterprise until 1620 when it was reorganized into the Council for New England which later made grants of land to several groups that settled on Massachusetts Bay and, finally, lost its charter in 1635.

Meanwhile the London Company had sent forth the expedition of three vessels with 120 people which founded Jamestown in 1607. Scarcity of food, sickness, and the Indians brought great suffering and, in spite of some reinforcements in numbers and supplies received the next year, by the spring of 1609 over three-fourths of those who had left England for Virginia were dead. To resuscitate the colony a new charter was obtained in that year and another fleet of nine ships with about 500 emigrants sent out. Many never lived to reach Virginia and of those who did few survived the following year. Disease, starvation, and the Indians decimated their ranks and the flesh of the dead was used to help keep alive the 150 who in 1610 survived out of over 900 who had come to the settlement since its foundation. It was then decided to abandon the colony and they were on their way down the river when they met another ship bringing food and new recruits and were induced to turn back.

Thus the existence of the colony was maintained through a continued outlay of money and influx of settlers, but only under great difficulties and suffering. By 1625 it held perhaps 1,100 persons, though up to that time over 5,000 had left England for the colony and the company had raised some £200,000, perhaps equivalent to \$4 million today, to finance the enterprise. By this time, the company had secured little in the way of profits, the traders were unwilling to invest more money, and the enterprise was bankrupt. At the same time disputes with the king led to the charter's being annulled in 1624 and Virginia became a crown colony, an outcome destined to be the fate of most of the colonies in the course of time. However, the company had served its purpose, for it was through its perseverance and this outlay of capital, labor, and human life that the colony was kept alive until it was able to get a living through its own efforts and became self-supporting.

To accomplish this result strenuous measures had been necessary and much learning through sad experience. Under the charter of 1609 a share in the enterprise had been given for each £12 10s. subscribed and each emigrant over 10 years of age who came was also granted a share and promised food, clothing, a house, and eventually 100 acres of land for himself and each member of his family. At the end of seven years the assets of the company were to be divided between the shareholders in proportion to the shares held. Under this arrangement the settlers turned in the product of their labor to the common store and received from it their supplies of food or other necessities and such things as were essential for their allotted tasks. But this, in some respects socialistic, arrangement, or perhaps better partnership, proved far from efficient or satisfactory. The settlers, lacking the incentive of private property in the product of their labor, were often inefficient and lazy, and those directing affairs wasted efforts in the attempt to raise impracticable products or find gold and wrangled among themselves.

Finally, under the more vigorous hands of Smith and Dale, a control almost militaristic in effect was set up, and the colonists succeeded better in supplying their wants up to 1615, when a marked improvement took place after each had been given 30 acres and full possession of the products raised thereon. About 1616 tobacco was found to be a profitable crop. Previously sassafras had been the only important export; but the advent of tobacco cultivation soon wrought a remarkable change for, in spite of the efforts to produce silk or wine and the fulminations of the king against the noxious weed, tobacco became the great staple upon which the economic development of the colony largely depended. From then on success was assured.

The Massachusetts Settlements. It was also the London Company that made a grant of land to the Pilgrims, but it proved inoperative, for the settlement which they made at Plymouth in 1620 was found to be beyond the limits of Virginia. So they drew up their own Mayflower Compact as a basis for control of the settlers. To finance the cost of the enterprise an agreement was made with a group of merchants for a joint stock arrangement similar to that of the Virginia charter of 1609. Each share was fixed at £10, the estimated cost of transporting an individual, and each emigrant received one share, the remainder going to subscribers for the stock. At the end of seven years the property was to be divided among the shareholders. It resulted in the same inefficiency and discontent as in Virginia and in 1623 a plot of land was temporarily assigned to each family to cultivate for themselves; in 1627 the colony bought out the interests of the English merchants for £1,800 and secured complete control under their own compact.

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In 1623 another group of some 60 settlers arrived, but the condition in which they found the colony was discouraging. Although a healthier location had enabled them to escape such severe ravages of disease as the Virginia colony had experienced and their relations with the Indians had been more friendly, they had suffered much from scarcity of food and their clothing was in rags. However, the more homogeneous character of the group resulted in greater harmony and the high ideals which had brought them into the wilderness nerved them with a firm determination to face its hardships and trials in a spirit that was bound to conquer. The intense religious zeal and austere moral idealism of this and the other groups of Puritan emigrants to New England was an important factor in the ultimate economic success of their settlements, to say nothing of the fundamental influence on their religious, political, and social life.

The next important settlement in New England was carried out by the Massachusetts Bay Company. In 1628 a group of people primarily interested in trade development secured a grant of land from the Council for New England; the following year, after this was confirmed by the king, who also gave extensive powers of government, a company sent out a small expedition that settled at Salem. Soon afterward a group of Nonconformists, anxious to secure greater religious freedom, entered into an arrangement with the company to migrate to its grant provided the government and control were transferred to Massachusetts. This having been agreed to, the Great Emigration began in 1630 during which year 2,000 colonists came to Massachusetts. The first arrivals, finding the people at Salem in sad straits from sickness and lack of food, decided to settle at Boston, though conditions were so discouraging that over 200 returned to England when the fleet sailed home. The winter was unusually severe, over 200 died before December, but fortunately new supplies from England and corn from Virginia carried them through. In spite of the arrival of new recruits and supplies it was several years before the settlers had an adequate supply of food. From 1633 on to the outbreak of the Civil War in England the migration continued on an extensive scale. As early as 1634 the population of Massachusetts Bay was estimated at 4,000; by 1643, at over 16,000. The cost of the supplies and transportation, excluding personal outlay, during this period was estimated at some £200,000, the equivalent of several million dollars today. Thus another colony was firmly established.

The first settlements in Rhode Island and Connecticut, which took place in the decade following 1635, were largely due to the migration of individuals or small groups from Massachusetts. In the case of Rhode Island the lack of religious toleration was the main motive which led the first settlers, starting with Roger Williams, to seek a new spot in the

wilderness where they could enjoy greater political as well as religious freedom. The strong individualism and the spirit of religious tolerance that marked the different groups that made the first settlements here have ever since characterized the state.

In the case of Connecticut it seems probable that more fertile land was what attracted the settlers who established the first towns along the valley of the Connecticut River from Hartford north. Though the Dutch and the Plymouth colony already had trading posts here they were soon dominated by the influx from Massachusetts Bay, which by 1636 had established about 800 people in these towns. Saybrook at the mouth of the Connecticut was founded by another Puritan group under a grant from the Council for New England and shortly afterward a third group founded New Haven. In both Rhode Island and Connecticut most of the settlers were squatters, or at best had only an uncertain title to the land, and the systems of government set up were of their own making. Gradually the different units in the two colonies were merged, but legal security was not finally attained until 1662-1663 when Charles II granted each colony a royal charter with provisions so liberal that they continued in use until well on into the nineteenth century.

The Dutch Settlements. Meanwhile another colony was being built up through the efforts of a trading company, in this case a Dutch enterprise. Following the explorations of Hudson, the Dutch had established a trading post at New York in 1613 and the United New Netherlands Company the next year received a grant of land between the 40th and 45th parallels and built forts at New York and Albany. This company was succeeded in 1621 by the Dutch West India Company, which made numerous grants of land to settlers in the region from Connecticut to the Delaware river. In 1626 the island of Manhattan was bought from the Indians for \$24 and New Amsterdam founded. Later, English settlers drove the Dutch from Connecticut and a group of Swedes and Finns that had established themselves on the Delaware in 1638 was taken over by the Dutch in 1655. The company in 1629 endeavored to increase settlement by grants, to those who brought over 50 families, of large tracts of land including many feudal privileges and known as patroonships; in spite of these efforts the population grew but slowly. Trade was restricted in various ways for the benefit of the company and the officials secured for themselves many of the most valuable rights and privileges. Constant disputes between the officials, demands of the settlers for greater freedom of trade and more self government, hostilities with the Indians, and, finally, the bankruptcy of the company added to the difficulties. The settlers developed agriculture to the point of supplying their own needs, but for trade depended largely on furs obtained from the Indians.

By 1664 the population of the colony was around 7,000. In that year the colony was seized by the English under a grant from the king to his brother the Duke of York, based on the claim of prior discovery, and Dutch control was thus eliminated from this strategic position in the midst of the English colonies.

With the conquest of New Netherland the last of the trading companies instrumental in the establishment of the colonies disappeared. They had played their part in providing the organization and much of the financing which made possible the successful establishment of the first colonies in Virginia, Massachusetts, and New York. By their aid the establishments had been enabled to survive the many difficulties and heavy outlay incident to the first years of their existence. But from the point of view of the financial backers of these enterprises they were a failure. The profits were meager at the best and the urgent need for more capital led most to sell out their interest or abandon it in bankruptcy. In this way, control passed to the crown in the case of Virginia and ultimately in New York; at Plymouth and Massachusetts Bay it fell immediately into the hands of the colonists themselves. In the latter case the General Court, or stockholders' meeting of the company, became the governing body of the colony, though in 1634 it established a representative system. In the rest of the colonies the promotion and financing of the early settlements were largely undertaken by individual or group proprietors yet, with but few exceptions, the results obtained were, from a financial point of view, not unlike those which befell the trading companies.

The Settlements in Proprietary Colonies. The proprietary grants were made by the king, generally to individuals whom he wished to reward or, as in the case of Penn, to whom he was in debt. The holders of such grants, who also received extensive powers of government, hoped to build up great landed estates in some respects similar to the manorial estates of feudal times. Although they depended chiefly on the income from the rentals or sale of land and a few manorial rights, they hoped to profit from such trade as could be developed. The difficulties which they faced in trying to accomplish these purposes were similar to those of the trading companies, for before any appreciable income could be obtained from their estates settlers had to be brought over and the resources developed.

In New England Ferdinando Gorges and John Mason obtained in 1623 a grant of the land between the Merrimac and Kennebec rivers together with a monopoly of the fisheries and trade. A few years later this was divided, Mason getting New Hampshire and Gorges Maine. Neither proprietor did much to colonize his grant but small settlements, chiefly devoted to the fisheries, were gradually established. Massachusetts

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laid claim to Maine in 1652 and finally bought out the rights to it in 1677; New Hampshire passed to the crown in 1680. In both colonies the growth of settlements depended chiefly on individual migration from England or the other colonies.

In the middle colonies the first successful proprietary grant was made to Lord Baltimore in 1632. The grant embraced the area from the Potomac to the 40th parallel and included extensive powers of government and feudal rights, since the proprietor desired to build up a great landed estate; he also sought to establish a colony where Catholics could secure freedom of worship. The first group of settlers arrived in 1634. Each received a grant of 50 acres of land subject to a small quitrent charge. The religious freedom that prevailed attracted many and with the development of the cultivation of tobacco the economic success of the colony was assured.

After New Netherland was captured from the Dutch in 1664, the Duke of York sold New Jersey to Lord Berkeley and Sir George Carteret who held it as joint proprietors until 1674, when it was divided into East and West Jersey, and finally sold to other groups of proprietors chiefly interested in the return from the land. Constant disputes between the settlers and proprietors and the inefficient management and control of the latter resulted in the Jerseys being reunited and becoming a crown colony in 1702. Meanwhile such growth as New Jersey enjoyed was due more to the influx of independent settlers from England or the other colonies than to the efforts of the proprietors.

In Pennsylvania, on the other hand, the success and rapid economic development of the colony was assured almost from the first. This was due in part to the more favorable environment and to the later date at which the colony was established, the experience of earlier settlers being available; but more to the wisdom, foresight, tolerance, and philanthropic spirit of the proprietor, William Penn. Penn received his grant in 1681 in payment of a debt owed by the king and was interested not only in personal gain but also in the establishment of a colony where the persecuted Quakers could enjoy freedom of worship. The spirit of religious toleration, the generous land laws, and the substantial political freedom which prevailed in Pennsylvania at once attracted a large number of settlers. The industry and thrift of the Quaker emigrants and later of the Germans, combined with the fertile soil and the relatively wise and tolerant control of the proprietors, resulted in rapid growth and Pennsylvania shortly became one of the most peaceful and prosperous of the colonies. Together with Delaware and Maryland it remained, with but brief interruption, under the control of the proprietor until the Revolution, these three being the only proprietary provinces where the government was not eventually taken over by the crown.

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In the Southern colonies a proprietary grant to the North Carolina region led to an abortive attempt at settlement in 1630 but, except for a few settlers from Virginia, no permanent results were obtained until after the grant of Carolina in 1663 to a group of proprietors associated with the Earl of Clarendon who received extensive feudal rights. Charleston was founded in 1670 by settlers, largely coming from Barbados; but the government of the proprietors proved inefficient and tyrannical, the colony grew very slowly and, finally, the government of the colony and most of the proprietors' lands were taken over by the crown in 1729.

Georgia, the last of the colonies to be established, was settled under a grant made in 1732 to a group of philanthropists headed by Oglethorpe. It was intended as a colony where those imprisoned for debt and others could secure a chance to start anew. A corporation was organized to finance it and Parliament appropriated £10,000 for the purpose. Control was vested in a group of trustees, but their management was inefficient, and in 1751 it also became a crown colony.

The Effects of the Proprietors' Efforts at Settlement. The significant points in the relation of the holders of proprietary grants to the development of the colonies are that, although it was in part through the proprietors' initiative and support that these settlements were established, still the proprietors in most cases failed to build up the great estates and secure the profits they had hoped for. Only in Pennsylvania, Delaware, and Maryland did the proprietors meet with success in their endeavors and retain their control up to the Revolution. In each of these colonies it is to be noted that there was an individual proprietor instead of a group and that he, especially in the case of Pennsylvania, was interested, at least in the earlier years, in something more than the profits to be obtained from his grant; he often resided in the colony, thus keeping in touch with the settlers' wants, and adopted a fairly tolerant attitude in the exercise of his control. In the other proprietary colonies the proprietors often wrangled among themselves and in their desire for profit assumed an intolerant attitude toward the settlers while their government was inefficient.

Probably most important of all, however, was the fact that the proprietors' resources were limited and settlers had to be attracted before their estates could be made to yield a return. The proprietors had little to offer as an inducement except grants of land. Yet land was so abundant in the colonies and the competition for settlers so great that generous grants on fairly easy terms—usually a low quitrent—had to be made to secure settlers. This of course made it impossible for the proprietors to secure the large returns from their landed estates that they had hoped for and also made it unwise for them to try and impose serious feudal obligations of any sort; for where it was attempted immigrants either

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went to another colony or simply refused to comply, and the proprietors seldom had sufficient power to coerce them. Thus the economic situation created by the abundance of land and the scarcity of labor largely explains the lack of financial success of the proprietary grants and also the failure to transplant to the colonies more than a mere vestige of such feudal customs as still survived in England. The relatively advantageous position in which the settler was placed in consequence of these underlying economic conditions was of the utmost importance in contributing to the political as well as the economic independence of the colonists and to the development of the spirit of individualism and liberty.

Other Factors in the Influx of Settlers. Although the trading companies and proprietors performed an important function in supplying a portion of the financial resources and organization which were so essential a factor in aiding the first establishment of the different colonies, the ultimate growth of these settlements, as far as it depended upon immigrants, was chiefly due to the individual initiative of the settlers themselves, who came in a steadily increasing stream in hope of bettering their material condition in the New World. Once the settlements had been firmly established, it was easy for an immigrant to get a start in the colonies provided the heavy costs of the voyage, perhaps £6 to £10, in those days a large sum, could be met. Where the immigrant had insufficient funds of his own, he entered into an agreement or indenture under which he sold his services for a period of years, usually five to seven; when he reached the colony, the shipowner, or other person with whom the agreement had been made, sold the right to his services to such colonists as desired them and thus secured payment for the transportation charges. The free-willer or redemptioner, on the other hand, was given a chance to indenture himself after his arrival and use the proceeds to pay the shipmaster. In this way was financed the cost of the trip of such immigrants as were unable to pay the charges otherwise and to that extent this system performed a function in the financing of settlements just as had the trading companies or proprietors at the start.

In addition to those who emigrated of their own free will there was a considerable addition to the colonists through those who were brought by force, such as the convicts, felons, and paupers who were sent out from England, those who were kidnaped and spirited off to the colonies, and the steadily increasing number who were brought over as slaves. In all these ways those who aided in the financing of the costs of migration played a part in establishing the colonies and in furthering their economic development.

The Relations between the Colonists and the Indians. Before describing the subsequent growth of population it is important to note the character of the relations between the settlers and the native Indians, since this

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had important consequences both economic and social and differed greatly from that in the French and Spanish colonies.

As has been previously pointed out, the white man brought with him a civilization infinitely superior to that of the Indians, an advantage which placed the latter completely at his mercy. The Indian could annoy him, occasionally destroy small settlements, and kill individuals or scattered groups; but in the end he was helpless before the onward march of a superior civilization. The whites were free to choose: they could live with the natives and try to lift them to a higher plane of civilization; they could annihilate them; they could treat them as a separate nation, bargain for their land, and trade with them, but generally hold aloof from close contact or association. The first course was the one most generally followed by the Spanish and, to a less degree, by the French colonists; the English for the most part chose the last. In consequence the English made little effort to civilize the Indians. Though some missionaries went among them and a few Indian schools were established, the rest lived entirely apart and had no contact with the natives except to bargain for furs or possession of their lands.

As the white settlements expanded and more land was wanted, the Indians under pressure, often involving war, gave up one region after another and reluctantly abandoned their happy hunting grounds in the face of the insatiable demand of expanding peoples and civilization of Europe which since the sixteenth century has made itself felt throughout the world. Finally, in the nineteenth century, having been pushed back far to the West and there surrounded on all sides by the inrush of white settlers, such Indians as remained were enabled to survive by the nation's adopting them as its wards and through a policy of paternalism which protected them, at least in part, from the avariciousness of the dominant whites.

In contrast to this was the attitude of the whites toward the aborigines in the French and Spanish colonies. Although the early Spanish conquerors and their successors almost exterminated the natives in the West Indies through war and the exactions of slavery, at a later period their attitude toward those on the mainland was much modified, chiefly through the influence of the Church and its missionaries. While the Spaniards subjected and ruled the Indians, by great bloodshed if necessary, the missionaries labored incessantly not only to Christianize them but to protect them, educate them, and instruct them in agriculture and the handicrafts. In fact, these servants of the Church were chiefly responsible for such progress in civilization as the natives attained. Nor should we forget the progress made in some of the Spanish colonies during this period in introducing institutions chiefly for benefit of the white inhabitants. There were to be found the oldest universities in the Americas

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whose achievements surpassed anything attained in the English colonies before the Revolution. Their great cathedrals were unequaled by any buildings of the colonists; the hospitals to be found in Mexico City had no counterpart in any English settlement. In such institutions, the product of concentrated control of wealth in the hands of the Church or the state, the English colonies were behind Mexico and Peru, though the condition of their population as a whole was far more advanced.

Still more important in results was the fact that the Spaniards mingled freely with the natives, often lived among them, and married them. Much the same was true of the whites who came to the French colonies in Canada or Louisiana, though the relatively small number of emigrants and the short period of French control made the consequences far less marked. The results of chief significance today are seen in the survival of the Indian tribes in Latin American countries and the presence of a large element of mestizos or mixed bloods in the population, as well as in the similar smaller groups among the French Canadians or in Louisiana. How far an influx of French and Spanish settlers into their colonies, in numbers at all comparable to the group who came to the English colonies, would have altered this outcome is hard to determine; but the significant point is that conditions in the English colonies and the attitude of their settlers toward the natives were such that today the number of pure- or part-blooded Indians in the population of the United States is insignificant. This has been a fact of vital importance in the economic as well as the social history of the nation.

The Growth of Population and Immigration. Once a series of settlements along the coast had been firmly established their steady growth was assured, though it depended for the most part, aside from the natural growth of the population, on the influx of immigrants coming on their own initiative or, in some cases, under pressure of force. The early settlements in Virginia and Massachusetts were the centers that attracted the greater portion of those who came over during the first three quarters of the seventeenth century. Up to about 1640 the New England colonies enjoyed the most rapid growth, chiefly as a result of the Puritan exodus from England. At that date there were perhaps 28,000 whites in the colonies, the larger portion in New England; most of the rest in Virginia. The Civil War in England checked the Puritan exodus but led some to migrate to Virginia and Maryland. By 1660 the white population of the colonies had risen to around 85,000 and, between that date and the end of the century, grew to nearly 275,000. During this last period the middle colonies first began to grow fairly rapidly. Under the Dutch the population of New York had increased but slowly and there were only about 7,000 in the colony when it was taken over by the English in 1664. Even after that the growth was not rapid, owing in part to the restrictive land

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laws and the presence of the Indians. The influx of settlers into northern New Jersey under the proprietors came in part from New York and in part from southern New England. But Pennsylvania and the neighboring portions of New Jersey and Delaware experienced the most rapid growth with the influx of Quakers and Germans who came to enjoy the comparative freedom established under William Penn. In the South the settlement in South Carolina, later increased by a group of Huguenots from France, grew rather slowly during this period. The tobacco-raising colonies of Maryland and Virginia enjoyed a steady growth, immigration being augmented by the indentured servants, paupers, criminals, and an increasing number of slaves. With the occupation of the tidewater region settlers began to move toward the uplands and also into the adjoining section of North Carolina.

By 1700, therefore, there was a fairly continuous line of settlements stretching from the Kennebec River in Maine along the coast to New

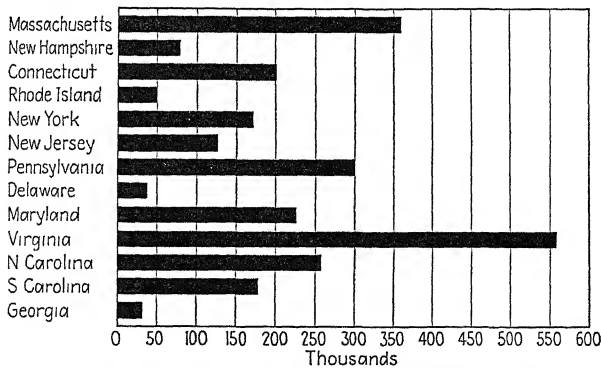


FIG. 4.—Estimated population of the colonies, 1775.

York, across New Jersey to the Delaware, down both of its banks to its mouth, spreading out over the land adjacent to Chesapeake Bay and southward over the tidewater region of Virginia to Albermarle Sound. Then, far to the south, detached from the rest and living a life of its own, was the small colony about Charleston in South Carolina. For the most part these settlements were within 50 miles of the coast and practically none more than 100 miles distant, with the exception of those that had pushed up the river valleys of the Connecticut and the Hudson to northern Massachusetts and Albany or up the Delaware and the Potomac. Moreover, up to this time the stock was almost entirely of English origin. Aside from the African Negro slaves of the South, as yet not numerous, a small group of Dutch in New York, a few French Huguenots, Germans, Swedes, and Scotch-Irish, it constituted a racially homogeneous group, drawn for the most part from the middle and lower classes of England.

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During the eighteenth century the population of the colonies increased at a very rapid rate, rising to totals estimated at about 500,000 in 1720, 900,000 in 1740, and 2,500,000 by 1775. In fact from 1660 up to the Revolution an increase of approximately one-third every decade seems to have been very steadily maintained. This growth was due not

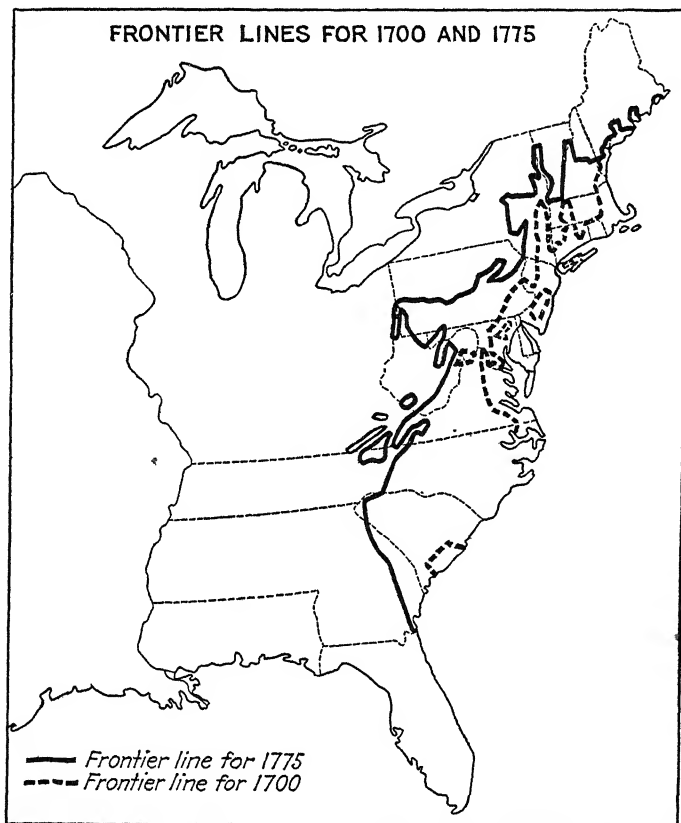


FIG. 5.—Line of frontier settlement, 1700 and 1775. (Based on C. O. Paullin, "Atlas of the Historical Geography of the United States," New York, 1932, by permission of the American Geographical Society of New York.)

only to the rising number of immigrants and slaves but also to the natural increase through those born in the colonies. Although the death rate was high, the birth rate was also high and large families were general, from six to a dozen or more children being very common. Benjamin Franklin estimated that there were on the average eight births to a family and that half of these children would live to grow up and have families of their own. Doubtless the scarcity of labor was not without influence in this connection. Children were put to work at an early age about the numerous

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household tasks, in the fields, or at some craft; extra hands, even though small, were always welcome. Moreover, the necessities of life were fairly abundant and the period before a child ceased to be a burden on the family budget a relatively short one, so that large families did not press so heavily upon the family standard of living as would be the case today.

Population and the Food Supply: Malthus' Law. In this connection we may diverge for a moment to what is known as the Malthusian law, for it calls attention to a tendency that is of very fundamental importance not only in the economic but also in the political and social life of nations. The principle was first set forth by an Englishman, Robert Malthus, in "An Essay on the Principle of Population," published in 1798, and the rapid increase in the population of the American colonies was one of the facts that suggested his conclusions.

The substance of his conclusion was that population *tends* to increase more rapidly than food supply. This proposition was based on the fact that, if there were no limits on reproduction but the physiological, the population would be capable of doubling itself as often as every 25 years. But the food supply could not be expected to go on indefinitely doubling in output at such a rate. Hence, if the potential increase in population continued, sooner or later a point would be reached where the food supply would be insufficient and the further growth of population would be checked by deaths from starvation or diseases incident to insufficient nourishment. These checks that tend to kill off the population Malthus called positive checks as contrasted with preventive checks which included the various factors that tend to limit the size of the family and so lessen the birth rate. Malthus was inclined to believe that these preventive checks would have little influence and that the *tendency* which he emphasized would actually result in such an increase of population that the positive checks of death from famine, disease, and so forth would really be the checks actually operative. This dismal conclusion, which was really advanced to explain much of the crime, misery, and suffering in the world, was based partly on the conditions existing in England at the time Malthus was writing. While he later modified his views so as to allow greater effect to the preventive checks, he seemed to have little hope that they would prove sufficiently strong to alleviate the situation greatly.

It is clear that, if the main checks upon the increase of population of any country are the positive checks, chiefly arising from the scarcity of food, then the standard of living of the people, using that term in the sense of the quantity of economic goods that the typical family has to live upon, will tend toward a level that provides barely enough for the family to subsist and reproduce their own number, thus allowing practically nothing above the actual necessities of life. The result would be a

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wretched existence and a very backward state of civilization, such as has been described as existing among the aboriginal Indians or can be found among primitive tribes or the masses of the people in parts of India, China, and other countries today.

On the other hand, should the people of a country generally choose to try and raise their standard of living and in order to do so limit the size of the family, thus putting into operation the preventive checks, it would be possible for them in the course of time (assuming no decrease in the output of goods) to rise above the mere subsistence level, enjoy something more than the bare necessities of life, and attain a higher stage of civilization. If a country happens at the same time to be increasing the physical output of food and other goods through more efficient methods of production and organization, then its people are in a position to choose between using this surplus for raising their standard of living or bringing up a larger family or in part for both.

Thus the very fundamental significance of the problem which Malthus raised is not simply one as to the relation between the population of a group or a country and its food supply, but that between the population and its supply of all economic goods; in any more advanced group or country it becomes a question of the pressure of population upon the standard of living. Hence the increase of population as it reacts upon this relationship between the population and the supply of economic goods existing in a country is one of the most fundamental factors in shaping the economic as well as the political and social life of a nation. It may lead a country to seek expansion of its political bounds to provide its crowded people with easier access to sources of food supply or other products, as with Japan or Italy today—a factor in imperialistic wars; it underlies much of the emigration from more densely settled regions to the less developed countries of the world such as that from Europe to the United States; and, through its reaction upon the actual standard of living of the people, it is an underlying factor in their economic and social progress. It is scarcely possible to overemphasize the significance of the choice to be made by a people between using such increased output of goods as economic progress provides for raising their standard of living or for increasing the population. They may choose either or, as is often the case, a measure of both; but to allow the increase of population to lower the standard of living instead of letting the desire for a higher standard of living press upon the birth rate is, according to modern standards of human progress, fatal.

In the American colonies the situation was obviously favorable to a rapid increase of population. Natural resources were abundant, the population was sparse, land was practically given to those who would go to it and, after the settlements were once firmly established, there was

no real pressure of population upon subsistence. In fact such was the prosperity of the colonies, notably during the eighteenth century, that in spite of the rapid natural increase in the population there was a steady rise in the standard of living as well. How far an effort to raise the standard of living may have exercised any check upon the birth rate is difficult to determine; but, judging from the high birth rate that appears to have prevailed, it seems safe to infer that as far as the mass of the people were concerned it was slight.

The really effective checks upon the growth of population originated chiefly in the backward state of public hygiene and medical knowledge of the time. Wars and Indian massacres took their toll and to this might be added such inhuman treatment of slaves as was to be found; but the chief check arose out of the conditions that tended to make the average length of life of those engaged even in peaceful occupation relatively short, and led to an extremely high rate of mortality among wives as well as among children. Just what the expectation of life at birth was we have no means of determining with accuracy but it has been estimated that near the close of the eighteenth century it was just under 35 years, in striking contrast with the figure of over 60 years today. This had important economic consequences through its effect upon the growth of population and labor supply, not to mention its significance for colonial life in general.

Immigration in the Eighteenth Century. The natural growth of population in the colonies was augmented by the inflow of immigrants and in the course of the eighteenth century this steadily mounted in volume. During this period, particularly after the end of the War of the Spanish Succession in 1713, the influx from England, which had been the chief source during the preceding century, was supplemented by three other important streams, the Germans, the Scotch-Irish, and the Negro slaves. Though a few from these sources had come to the colonies previously, these groups constituted a particularly important element in the immigration of the eighteenth century.

Many of the Germans came from the region along the west bank of the Rhine from the Palatinate to Switzerland, a section that had suffered severely during wars of Louis XIV. A large number belonged to sects that had suffered from religious persecution. To escape these ills many fled to England and later went to the colonies; others migrated direct to America. A small group went to North Carolina where they founded New Bern. Another group of some 3,000 of those who had gone to England was sent to Albany, N. Y. in furtherance of a scheme of the governor for making tar; and, though the enterprise failed, many settled in the adjacent valley of the Mohawk and others moved southward to Pennsylvania.

It was the latter colony, however, that attracted the greater portion of the German emigrants, and during the decade following 1717 they

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arrived in that colony in such numbers as to alarm the people, who feared it would become a German state. Still the influx continued and many pushed on into the upland region of the South. At the end of the colonial period it was estimated that nearly a third of the inhabitants of Pennsylvania were Germans and that the total number of German origin in all the colonies was at least 225,000. They were inclined to be clannish and stuck closely together, a characteristic that is reflected in the survival to this day of the groups generally known as the Pennsylvania Dutch. Germantown was one of the first centers of their settlement, but they spread throughout the good agricultural region in the southeastern portion of the state and westward toward the Alleghenies. They were peaceful, hard working, careful, thrifty farmers, among the most successful in the colonies.

Still more important in point of influence were the Scotch-Irish. They had their origin in a migration of people from Scotland to northern Ireland, chiefly Ulster County, under James I, in the early years of the seventeenth century. This group, of dour, puritanical Scotch of the Presbyterian faith, settling among the emotional Celtic stock of Ireland with their Catholic Church, laid the foundations of a discord that still rends the peace of the Emerald Isle. At that period, however, they suffered more from the religious and economic repressions imposed by England.

Although a small group had migrated to Maryland at an earlier date, the great migration of the Scotch-Irish did not begin until about 1714. The first group went to New Hampshire and Massachusetts and were instrumental in setting up a considerable manufacture of linens such as they had carried on so successfully in Ulster. Thereafter the migration shifted to the middle colonies, especially Pennsylvania, which was then attracting so many settlers. For the most part they moved to the frontier, and as the region up to the Alleghenies was filled in by settlers, they began to push southward into western Maryland and in the 1730's and 1740's they were advancing up the valley of the Shenandoah in Virginia and on into the upland sections of the Carolinas. Still others went direct to the Southern colonies and settled on the frontier. In consequence, the upland region in these colonies was settled by a group of small farmers very different in type and origin from the planters who dominated the tide-water region, a difference which later led to much dissension between the two groups.

It is estimated that by the time of the Revolution the number of Irish in the colonies was slightly over 200,000 of whom nearly two-thirds were Scotch-Irish. A vigorous and aggressive stock, they made excellent defenders of the frontier and entered with spirit and determination into the struggle for Independence.

The influx of the third group, the Negro slaves, will be described subsequently. Here it will suffice to note that, although the first slaves were

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brought to Jamestown by the Dutch in 1619, the number imported was relatively small until after the first of the eighteenth century. From then on, the growth was rapid and it is estimated that by the time of the Revolution there were over 500,000 in the colonies, nine-tenths of them in the region south of Pennsylvania.

While in general immigrants were welcomed and there was considerable competition between the colonies to attract them, there also was opposition to the influx of certain groups. Occasionally religious grounds led to efforts to restrict Catholics or Quakers, but the strongest objection was directed against England's practice of sending paupers and convicts across to secure relief from the burden of their support. Repeated efforts of the colonial assemblies to prevent this were generally unavailing. An English act of 1670 designed to stop the sending of the latter class was not effectively enforced and was repealed in 1717, while colonial acts to check this inflow were disallowed. It has been estimated that altogether about 50,000 criminals and felons were sent across.

The Extent of Settlement by 1775. This growth of population had by the end of the colonial period resulted in a nearly unbroken line of settlements along the coast from the Penobscot in Maine almost to Florida, and the line of the frontier settlers had been pushed back in all regions north of Georgia well against the barriers of the Appalachian Mountains. Southern New England was practically all settled and people were moving up the valleys of the Merrimac and Connecticut into northern New Hampshire and Vermont. In New York Indians had checked the advance, and the population was largely confined to the southeastern portion and the Hudson River Valley, though a long arm of settlements extended up the Mohawk. From Pennsylvania southward through Virginia the settlements extended to the mountain chains; along the Potomac and Shenandoah they reached well toward their sources and an appreciable group was located over the mountains in southwestern Pennsylvania.

Though much less densely settled than colonies in the North and, as everywhere, tending to concentrate along the river valleys or the coast, the Carolinas and eastern Georgia had grown rapidly in the decade before the Revolution and had extended their settlements to the Blue Ridge; in North Carolina a few had gone over the mountains and located in the valley of the Watauga in what is now eastern Tennessee. It was from this frontier outpost that Daniel Boone and his followers had blazed a trail through Cumberland Gap and established the little settlements in central Kentucky just before the Revolution started.

Aside from these frontiersmen in Kentucky and western Pennsylvania there were no settlements west of the mountains except the little groups about the forts and trading posts that had been established by the French which, as far as those east of the Mississippi were concerned, had

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passed, along with Canada, into the possession of Great Britain in 1763, while Spain secured the region to the west. These outposts had been located at scattered strategic points, chiefly for purposes of defense and trade with the Indians, though they served also as centers of French missionary activities. Trade with the Indians was the chief economic activity and few settlers had been attracted to the region; those engaged in farming attempted little more than to supply local needs. The French settlements in Louisiana, then in the possession of Spain, had enjoyed the greatest growth. New Orleans, founded in 1718, had become the trading center and had grown to a population of over 3,000; that of the whole colony was over 13,000, around half being whites. To the north, in what was known as the Illinois country there were small groups about the forts at Kaskaskia, Kahokia, and Vincennes; St. Louis, founded in 1764 and still in the hands of Spain, was just starting to develop as a trading center. The Illinois country had altogether a population of only a few thousand and this seems to have been more than were living about the other posts at Pittsburgh or along the Great Lakes. In the Floridas, while under Spanish control, the few small settlements had failed to grow appreciably; after they passed to Great Britain in 1763 there was some migration to the region along the Gulf coast, chiefly from the English colonies on the Atlantic.

In consequence of these movements of population the middle and Southern colonies had enjoyed the most rapid growth during the eighteenth century. Excluding slaves the total was divided fairly evenly among the New England, the middle, and the Southern groups, counting Maryland in the last; the South had a somewhat larger proportion and, if the slave population of some 500,000 most of which was found in the South be added, its proportion was considerably greater. Only an extremely small percentage of the people dwelt in the large towns or cities, perhaps around 5 per cent; the rest lived in small country towns or scattered through the rural districts.

Such cities as developed owed their growth in the main to trade and commerce and so depended largely upon the growth of population in the adjacent region. Although Boston had been the largest city in the colonies up to 1750, it was later surpassed by both Philadelphia and New York. Shortly before the Revolution, Philadelphia probably had about 28,000 inhabitants and New York over 21,000; Boston was third with around 15,000. Charleston, the only large city in the South, may have had 10,000 and Newport nearly as many, and such places as Baltimore, Salem, Providence, and Albany ranged from 3,000 to 8,000.

Although the eighteenth century brought considerable additions of a stock somewhat different in origin and characteristics from those of English origin who constituted the great portion of the inhabitants at

the end of the seventeenth century, the colonists, except for the Negroes, still remained fairly homogenous in character and in the main of Anglo-Saxon origin. A recent estimate of the distribution of the white population by national and linguistic stocks as enumerated in the Census of 1790 places the English at 60.9 per cent, the Scotch at 8.3 per cent, the Irish at 9.7 per cent, and the Germans at 8.7 per cent, the small remainder being Dutch, French, Swedes, or unassigned. It may be safely assumed the proportions were about the same in 1775.

In religious belief they also had much in common. By far the greater portion belonged to the various Protestant faiths; those representing the Puritan or Calvinistic tendencies, such as the Congregationalists or Presbyterians, were predominant. In Pennsylvania the Quakers were most influential and in the Southern colonies the members of the Anglican Church, though in the upland sections the Scotch-Irish Presbyterians, the German sects, and the Quakers were most numerous. But Puritanism in its broader sense was something more than a matter of religious belief; it has been defined as "an attitude of mind rather than a system of theology" and represented a democratic reaction against autocracy in both state and church combined with an emphasis on an austere morality in private life; it represented the liberal, reforming ideals of the time and played an important part in shaping the political institutions and the tone of social life among a large group of the colonists as well as in their religious affairs.

The greater portion of the colonists was thus a mentally alert, vigorous, aggressive, and democratically inclined group; their belief in liberty and freedom was apt to be limited to the particular group, religious or political, to which they belonged and in application it often became intolerance. Their idealism helped them to face the hardships of a pioneering life and to attack the tasks incident to the development of the country's resources with unbounded energy, perseverance, and a spirit of great optimism; all of which, together with their thrift and austere living, contributed in no small measure to the economic upbuilding of the colonies. Although such traits are not to be valued primarily in economic terms, their significance in the material advancement of a nation must not be forgotten.

CHAPTER V

AGRICULTURE AND OTHER EXTRACTIVE INDUSTRIES IN THE COLONIES

Introduction. In describing the various lines of economic activity carried on in the colonies it is simpler, partly because this corresponds with the treatment in later periods of this history, to divide the account on the basis of such activities as the extractive industries, manufactures, and trade. It is necessary at the start, however, to note that, in so far as such a division gives the impression that the individuals engaged in these different lines of economic activities specialized in any one to the exclusion of the others, it is somewhat misleading in regard to the greater portion of the colonists. In fact there was no such sharp differentiation between the groups of workers as we are accustomed to today.

Nearly everybody engaged in farming on a larger or smaller scale, but a great many of these farmers engaged in other activities as well. Many manufactured goods were turned out in the farmer's household, particularly during the winter months when farm work required less time; lumbering, hunting, and fishing were often side lines of production for him; and running a country store or engaging in other lines of trade provided additional means of getting a living. Even professional men such as the doctor, lawyer, or minister, if living in the country, usually found that their farm rather than the proceeds of their profession was the chief means of support. This situation, which was a product of all the conditions that tended to limit specialization or division of labor and maintain a household or local economy, must be borne in mind as an outstanding feature in the economic life of the colonists.

The Disposal and Tenure of Land in the Colonies. An important factor in the economic situation affecting the colonists was the conditions that shaped the disposition and ownership of land. In England at this time land tenures were largely shaped by characteristics that had developed under the feudal system and still survived in a modified form. "Absolute free ownership of land was unknown to English common law." Land was held subject to certain rights of a feudal overlord or the king. Before the colonies were settled the rights involving labor, services, or goods had almost everywhere in England been commuted to an annual payment of money known as quitrent. Such land, held in what was known as free and common socage, or fee simple, meant that the holder had the

right to dispose of it and that it was heritable. This socage form of land tenure was common and the freest in England at the time and it was this form that came into general use in the colonies. There it

. . . applied only to freeholds and leaseholds, the prevailing types of land in the colonies, and unless the payment of the rent were waived, as in the case of the corporate colonies, all colonial freeholders and leaseholders were under obligation to recognize in one form or another the higher title of some landed proprietor.¹

In the proprietary colonies, as has been pointed out, the proprietors had looked upon their grants as affording an opportunity to build up great landed estates with various feudal rights and dues. The proprietors themselves paid the king as a token of his overlordship such nominal things as a beaver skin or Indian arrows and usually a fifth of the gold or silver found.

From the settlers who came to their grants the proprietors ordinarily exacted an annual quitrent. Although there were also other feudal obligations, such as escheat fines on alienation of the land or in some cases having to have grain ground at the lord's mill, the quitrent was always considered by far the most important and valuable of these feudal dues and was the chief cause of disputes. The rent varied considerably in the different grants but was usually between $\frac{1}{4}d.$ and $1d.$ an acre, so low that it was never a heavy burden, except for holders of large tracts of unused land; though when payment in silver was insisted upon, as was sometimes the case, the difficulty in obtaining the specie increased the friction that was nearly always present. When the government of the proprietary colonies passed to the crown, as was ultimately the case in all but Pennsylvania, Delaware, and Maryland, the land rights also passed in most cases. In a few instances, as in parts of New Jersey or North Carolina, this did not occur. In the latter the resulting separation between the governing authorities and the landowners tended to increase the friction and the difficulties in collecting the quitrents.

The constant disputes, difficulties, and expense of collection resulted in but little net revenue from the quitrents. In New Hampshire and New Jersey the proprietors secured almost nothing and very little was obtained in New York or Carolina. In Virginia and Pennsylvania somewhat larger returns were secured and in Maryland, where the proprietor seems to have been most successful, the total of the quitrents may have amounted to £5,000 a year. The total of quitrent rolls in both crown and proprietary colonies just before the Revolution has been estimated at £37,500, though the actual collections averaged only about £19,000 a year. In the corporate colonies of Massachusetts, Rhode Island, and Connecticut

¹From C. M. Andrews's introduction to B. W. Bond, "The Quit-Rent System in the American Colonies," p. 17, New Haven, 1919.

quitrents did not exist. There the land had been granted by the crown under free and common socage to the corporations that governed the colonies and it was in turn granted by the colonies to individuals or in townships to groups of individuals without the exaction of a quitrent, such a charge being thought contrary to the spirit of their institutions.

The methods by which the land was disposed of varied considerably in the different colonies, being influenced by the form of government that prevailed and the methods of agriculture. In the New England colonies, where small farming and settlement by groups were customary, the colonial assemblies usually granted the unoccupied lands in townships to groups of individuals, though in the eighteenth century, when speculative activities developed, such grants or sales were increasingly made to groups primarily interested in speculation rather than in settlement. The land so received was then divided into sections by the town; a portion was kept for pasture, meadow, or woodland as the common land of the town and the rest apportioned as farms and town lots among the grantees. As new settlers arrived they were given grants from the common land, or an old settler who had rendered some conspicuous public service to the community or set up a mill might be given such a grant; sometimes the remaining pasture or woodlands were divided up among the townsmen. Thus as time went on these common lands gradually disappeared through this process of distribution to private individuals. Under this system the settlers tended to congregate in scattered groups of small rural communities and the township became the unit of local government.

In the middle colonies the system of agriculture and mode of settlement led to methods in the disposition of land and a type of settlement that in many respects resembled those of New England. An exception to this was the patroonships of New York inherited from the Dutch, together with the large grants subsequently made to various individuals; aside from these large holdings along the banks of the Hudson River, most of the land was held in little tracts by small farmers. Unlike New England the grants or sales were usually made direct to individuals rather than as townships, though there was some tendency for individual settlers to gather together in one locality. Generally speaking the county was the most important unit of local government, though in some sections, especially New Jersey where there was a considerable migration from New England, the smaller township unit performed many functions.

In the colonies from Maryland southward, chiefly in the tidewater region, a distinctly different type of landholding and settlement prevailed. Large plantations were the rule so that the population was widely dispersed and towns seldom developed; in consequence, the county became the important unit of local government. The acquisition of large estates was furthered by the more general use of the system of headrights under

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which a person bringing over a settler was entitled to a grant of land, usually 50 acres, subject to the customary quitrent. Great abuses developed in connection with this system and many large estates were thus acquired. In 1705 Virginia gave up the system of headrights and sold land outright. In other cases large grants were made to individuals because of their having performed some meritorious public service. It was also customary to give to individuals who migrated at their own expense a grant of 50 acres, and indentured servants commonly received a similar gift on the expiration of their term of service and were thus able to start in as independent small farmers on their own account. In time the practice of selling small tracts of 50 or 100 acres for a fee of 5 to 10s. became more common; this appears to have been the method most in vogue among the settlers who poured into the upland region of the South during the eighteenth century and generally engaged in farming on a small scale.

The growth and continued existence of large estates in the South and in parts of the other colonies was furthered by the adoption of the system of primogeniture under which the eldest son inherited all of the landed property. This undemocratic system of European origin did not exist in New England or Pennsylvania where, in its place, the eldest son was only given a double share, a modification nearer in harmony with the more democratic spirit that prevailed in those colonies and tended to check the growth of large landed estates.

Although studies of the subject are as yet too incomplete to make it possible to give more than a sketchy outline of the methods employed in disposing of land in the colonies, we can draw fairly definite conclusions as to the most significant features that marked the system. By far the most important is that the acquisition of land on the part of settlers was easy and inexpensive. We might almost say that land was practically given away; at least the ordinary small farmer could obtain enough to get a living for a relatively small charge and there was always available the frontier where, beyond the effective jurisdiction of any control, he could settle as a squatter and at any rate make a start before the law intervened to enforce the rights of property. Frequently he was later granted title without payment. This was in marked contrast to the situation that confronted a man in the relatively densely settled countries of western Europe where land was dear and its ownership largely concentrated in the hands of a few who were inclined to exact a heavy rent or other dues or services from their tenants.

The fundamental fact in the economic situation back of the migration to the New World was that land was cheap and labor was scarce. More settlers and more laborers were needed on all sides in the colonies: by the trading companies, the proprietors, the planters, and even the small

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farmers—in short in every line of economic activity; and cheap land was the chief and the cheapest inducement that could be held out to attract them. Under such conditions and the resulting competition between those seeking to attract settlers and those desiring to secure more laborers, land was made available on extremely easy terms, often practically given away; and the efforts of those who sought to transfer the surviving relics of the feudal system to the colonies and obtain a large revenue from great landed estates almost invariably broke down. Even where quitrents existed the amount of the charge was never an appreciable burden to the real farmer who tilled his land, though a constant source of irritation and disputes. Thus, in colonial times as during the following century, the existence of an abundant supply of easily obtainable land proved to be one of the most important factors tending to promote the economic independence of the people and, along with that, a spirit of freedom and democracy.

The Agriculture of the Colonies. It was these same conditions that tended to make the extractive industries, especially agriculture, the overwhelmingly predominant economic activity of the colonists. Natural resources were the agent of production which was most abundant in the colonies and both labor and capital were relatively scarce. It is an economic principle, known as the law of comparative cost, that where trade is carried on between different regions or countries each region will tend to specialize in the production of those commodities in which, under the existing economic conditions, it possesses the greatest relative advantage—the same principle that underlies all specialization and division of labor. It was the abundance and cheapness of the natural resources that gave the colonies their greatest relative advantage in the extractive industries rather than in manufacturing; for the same reason, in so far as they engaged in trade, the commodities which they sold to other regions were chiefly the products of these extractive industries.

This principle would explain the specialization in extractive industries prevalent in the colonies only in so far as the products of these activities entered into trade with other regions. There was another element in the situation which also was important in bringing about the same result—the very fact that many of the colonists were so situated that extensive trade was impossible. Those living on the frontier or in sections where the means of transportation to a market were poor and the costs heavy, as was true of most not within easy reach of navigable waters, were of necessity compelled to carry on agriculture to obtain the food essential to life. Although for these agriculture was a necessity, the same difficulties in the way of trade also compelled them, so far as was possible, to produce the raw materials and work up in the household a variety of other things that we think of as manufactured goods to supply the family needs for

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shelter, clothing, utensils, etc. The household or local economy forced them to be Jacks-of-all-trades as well as farmers. The combined influence of these two factors in the situation explains the almost universal pursuit of agriculture in the colonies.

In the seventeenth century, when most of the population was still living within easy reach of cheap water transportation, agriculture was pursued at the start because supplies of food were a necessity and imports from England too uncertain; later, it became clear, not only that it would be cheaper to produce their own food, but that the products of the soil were those that would afford the greatest profit in their trade with other regions. In the eighteenth century the growth of trade furthered the tendency of those so located that they could produce for the market to specialize in these lines, while the spread of population into the interior where cheap transportation was less available made agriculture a necessity for that portion of the settlers. Even those engaged in the other extractive industries such as lumbering, hunting, and fishing were apt to depend on cultivation of the soil as an important, if not the chief, means of support. Agriculture may be said to have been the main pursuit of at least 90 per cent of the population even up to the end of the colonial period.

The Chief Agricultural Products. The agricultural products of the colonies depended in the first place upon the soil and climate but also in part upon economic conditions and the settlers' knowledge of agricultural technique. At the start it was inevitable that more or less experimentation would have to be done before they learned what crops the soil and climate were best fitted to produce and what were the best methods to use in growing them. The products raised by the Indians were but few and, although the colonists learned something from them as about the cultivation of corn and tobacco, they hoped to raise a great variety of other products as well. It must be remembered, too, that the reports sent back to Europe as to what the region was capable of producing included a great variety of things such as were not grown in England and were produced only in tropical or semitropical regions. But it was just these things, such as sugar, silk, wines, coffee, and olives, that England was most hopeful of securing from these colonies; for under the mercantilist ideals these were needed to round out the self-sufficiency of the empire and obviate the necessity of buying them from foreign countries. These are the reasons that explain most of the experiments made by the colonists in growing such crops as well as their efforts to stimulate by bounty or otherwise various products that were later abandoned because unsuited to the existing conditions.

The experiments made in the effort to produce the products that England particularly desired began at the founding of the colonies and

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in some regions were continued, chiefly through the aid of artificial stimuli such as bounties, until the end of the colonial period. Even in New England, least fitted of all for such products, they tried to grow cotton, olives, and coffee; in the desire to stimulate the cultivation of grapes, vinedressers were brought over and bounties offered, all without enduring results. The importance of silk culture was constantly emphasized and efforts to introduce it were made from New England to Georgia. In Virginia and Georgia, laws were passed requiring the planting of mulberry trees and some silk was actually obtained, the Governor of Virginia producing some 400 pounds as early as 1655; in Georgia, the chief seat of the folly, the output under the stimulus of a bounty rose to some 20,000 pounds in 1766. Hemp was another product that England desired to obtain from the colonies, but in spite of the bounty offered little was raised. In the case of indigo, on the other hand, greater success was attained. It was introduced into South Carolina about 1741 and, aided by bounties, the output grew rapidly, so that by the time of the Revolution 500,000 pounds were being exported. In after years, with the loss of the bounty and other adverse developments, even this crop practically disappeared.

In some sections the failure of these experiments was due to the unsuitable conditions of soil and climate, and the colonists soon realized the futility of trying to grow such products. In other cases their experiments showed that it was at least physically possible to produce these much desired commodities but that the economic conditions were unfavorable. The latter was the outcome of all the conditions that tended to make other products more profitable. An important element in this was the scarcity of labor combined with the fact that many of these products required a relatively large amount of labor in their cultivation. Under such unfavorable economic conditions only some special inducement, such as a bounty, would lead a person to undertake their cultivation. Still, up to the end of the colonial period, it was deemed worth while to meet the added cost involved in order that certain of these commodities, such as indigo or silk, might be produced in greater abundance.

It did not take long experimentation for the colonists to discover at least some of the agricultural products that, under the existing conditions, were most profitable to produce. In New England, where there was but a thin covering of glacial drift and where the soil, though enduring, was less fertile than elsewhere, corn became the most important single crop. Wheat, though grown from an early date, proved an uncertain crop in this region, and oats was also a less important cereal crop. Among the vegetables the squash, pumpkin, turnip, and numerous garden products were grown; the white potato does not seem to have been introduced till the first of the eighteenth century. The middle colonies, with regard to both climate and fertility of soil, more nearly corresponded to the

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conditions existing in England. Wheat was the most important cereal crop, but corn was produced in abundance along with smaller amounts of oats, barley, rye, and buckwheat. The climate made possible a somewhat greater variety of vegetables than in New England. In Maryland and Virginia tobacco became the great staple and dominated their agriculture throughout the colonial period. Corn was also produced in abundance and later, as settlers poured into the upland districts, wheat became an important crop.

In the South the sweet potato and melons were found and garden vegetables suitable to the climate were grown to supply the family or local wants. In the far South rice, which came to be the great staple, was not introduced successfully till just before 1700; indigo, which flourished with the aid of a bounty, did not come in until 1741. Corn and, in uplands, wheat were raised along with the garden vegetables. In addition to the cereals and vegetables a variety of fruits was cultivated. Apples were the most successful fruit, particularly in the North, and the cider obtained from them was one of the most common drinks. Cherries, peaches, and plums were also raised, and the gardens often included strawberries and raspberries in addition. A patch of flax helped to eke out the family needs by supplying the fiber for linen cloth, and the seed came to be exported in considerable quantities to Ireland or else was used to obtain oil.

For livestock the colonies had to depend originally on what was brought from Europe. Hogs and cattle were the most important. The former in particular thrived upon the feed available in the woods and pork was the chief meat consumed in the colonies. The cattle supplied beef and dairy products; the oxen were employed for the heavier draft work about the farms. As the upcountry in the Southern colonies became settled, a form of range cattle industry developed through the establishment of the "cow pens," the cattle when grown being driven to the seaboard markets such as Philadelphia or Baltimore. There they were slaughtered, the meat was then salted or pickled, and considerable quantities were packed for export. The horses of the colonial period were comparatively light in weight; heavy draft horses were rare. They were chiefly used for riding or attached to light vehicles and stagecoaches for travel and a few were bred for racing. Sheep were less frequently kept and suffered from the general lack of care and particularly from attack by the wolves. The largest flocks were found on the islands or peninsulas along the coast such as those about Boston harbor, Nantucket, Martha's Vineyard, Long Island, or the Virginia coast, sections where, once the wolves had been killed off, it was easier to protect them. They were kept chiefly for their wool as the prevalent breeds did not produce the best mutton.

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Technological Methods. The methods of carrying on farming operations which prevailed among the colonists were almost primitive in their simplicity. Although it is true that in Europe at the time the colonies were founded the methods in vogue had undergone little change for centuries, the colonists were content with much the same methods and did little to keep up with the improvements introduced in England during the eighteenth century. The tools used were generally heavy and cumbersome. The plow, usually entirely made of wood except for an iron tip, sometimes required two or three oxen to pull it. Grain was cut with a hand sickle and threshed with a wooden flail or trod out by horses. For transportation heavy two-wheeled ox carts were used or, when snow was available, sledges.

Clearing the land for cultivation was one of the most difficult tasks confronting the new settler in any region. Where possible a site without trees was chosen. Many New England towns were located on high ground rather than in the more fertile river valleys because the timber was less dense there. Where trees existed, the quickest way was to girdle them and leave them standing till they died, crops being planted between the trunks. Even after the trunks were cut down or rotted away, the stumps might be left for many years; sometimes they were used for fences. Stone walls were constructed out of the rocks taken from the fields; but fences of any sort were built only where it was necessary to protect the crops from the livestock. In the small villages it was generally found better to hire a person to watch the herds instead.

Little effort was made to maintain the fertility of the land either through the use of fertilizer or by proper rotation of crops. Although crops were sometimes changed or the land allowed to lie fallow, root crops to restore the nitrogen were seldom employed. Land was cheap and, when it became exhausted, was abandoned and new land put under cultivation. Scarcely more care was taken with the livestock than with the fields. For the most part they were turned loose to range through the woodlands or pastures and, after the crops had been gathered, allowed to graze on the stubble. Hay was gathered for them from the meadowlands, but they were seldom given enough grain to fatten them properly or to keep the draft animals in good shape. Nor during the colonial period was any general attempt made to improve the breed of livestock.

The Organization of Agriculture. The outstanding feature that characterized colonial agriculture was the fact that the greater portion of the products raised was for the family's own consumption. This was typically the situation except in regions such as the southern plantations where great staples dominated. This relatively self-sufficing economy meant that most farmers raised a considerable variety of products, in short engaged in general farming, and that commercial agriculture, that is raising crops

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chiefly for sale in the markets, played a relatively small part in the farm organization in most sections. Moreover, the amount of capital employed in the way of tools and equipment was relatively small and the labor used was generally limited to that supplied by the family; so the problems of finance and labor were distinctly less difficult than today and the farmer thus more independent of the market conditions for these factors of production.

An exception to this is found on the Southern plantation where the problem of securing an adequate supply of labor was always pressing; when the supply of indentured servants proved insufficient toward the last of the seventeenth century, it led to a rapidly increasing dependence on slaves for the tobacco plantations. The later introduction of rice and indigo was largely dependent on Negro slaves, since the conditions of work on these plantations were particularly trying for white labor. North of Maryland few slaves were employed on the farms; in the middle colonies indentured servants continued to supply such hired labor as the farmer needed. These servants, however, usually became independent farmers as soon as their term of service expired. In New England and throughout the frontier in all the colonies, as well as among the small farmers who made up the bulk of the rural population everywhere, the labor used was limited to that supplied by the family group. For labor as for most needs, the farm household had to be a self-sufficing group.

The organization of his work was thus a comparatively simple problem for the colonial farmer. What was going on in the rest of the world reacted in only a slight measure upon him; he had little reason to bother about market prices and marketing methods or organization. His problem was mainly that of determining what the family needed and then planning how to use the resources at his command to produce the things necessary to supply those needs in the most efficient manner. This generalized statement of the situation of course applies with only varying degrees of accuracy to the farmers of different regions. It is most applicable to the farmers of the frontier region stretching from New England to the upland of the Carolinas; it is fairly applicable to most New England farmers, somewhat less so to the farmers of the middle colonies who raised a considerable amount of grain and livestock for the market, and least applicable to the large plantation owners of the tidewater South growing the great staples tobacco, rice, and indigo.

Other Extractive Industries: Lumbering. After agriculture, lumbering was the extractive industry most widely pursued in the colonies. In those days, before iron or steel was extensively used or coal was generally available for fuel, wood was a raw material of even more universal use than today and furnished almost the only supply of fuel. Moreover, the region in which the colonists had settled was thickly forested and afforded

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a supply of this raw material that was more than abundant, since the clearing of the forest growth was often a serious obstacle to farming. Both hard- and softwoods were available; in them the colonists found a means for supplying innumerable wants of their own and also for manufacturing various products for the markets in Europe or the West Indies where the timber supply had been seriously reduced or was not of a character to meet their needs.

In one way or another much the greater portion of the farming population of colonial times was to some extent engaged in lumbering, if only to supply the family needs. The family wood lot provided all the fuel and generally the timber out of which the log cabin or frame house was built, not to mention that used to make furniture, various household utensils, and tools. Lumbering was one of the by-products of general farming and could always be turned to during the winter months when, after the crops had been garnered, more time was available. Then such timber as might be required for the household needs was secured. In addition, it was often possible to secure logs to be floated down the nearest stream and sold at more distant markets; timber was burned to make potash and pearlash which, being easily transportable and in demand for the export trade, found a ready market and thus helped to augment the relatively few things that the farmer sold for cash or by barter.

There were also those who may be said to have specialized in lumbering where the resulting products entered extensively into trade. In the Northern colonies, especially New England, these were engaged in cutting the timber used to build ships and supply the masts needed by the royal navy or that required for the casks used to ship goods, especially in the West Indies and southern Europe. In the Southern colonies the pine forests of North Carolina, in particular, were employed to produce naval stores, tar, turpentine, rosin, also in demand for ship building; cypress and cedar furnished shingles also exported in large quantities.

The Fisheries. After lumbering the fisheries were the most important extractive industry. In the case of New England this proved a most valuable asset, for, excepting lumber products, that section produced relatively little that found a ready market outside of the colonies. The fisheries of the North Atlantic coast were among the richest in the world, supplying mackerel, hake, pollock, herring, and whales; but most important of all was the cod. In fact, the fisheries were the first resource of the region to be extensively used by Europeans, for French and English fishermen had been regularly resorting to the Newfoundland banks for a century before permanent settlements were established in New England; most of the temporary settlements previously made were offshoots of the industry.

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The colonists on Massachusetts Bay almost immediately began to make use of this resource, chiefly along the New England coast, though by the last quarter of the seventeenth century they were extensively employed off the Nova Scotian coast. Before the middle of the century they had a surplus which they began to ship to the West Indies. The whale fishery was slower in developing and at first limited to stranded whales or such as could be captured in small boats operating along the coast. By the end of the century, however, it had become fairly well established; during the eighteenth century the growing scarcity of whales led to longer and longer voyages extending into the Arctic and Antarctic seas, and by the time of the Revolution over 300 vessels were engaged in this pursuit, Nantucket Island being the chief home port.

Although little was done during the colonial period by the settlers south of New England to develop the neighboring fisheries, except to secure supplies for local needs, the New England colonists continued to expand their activities during the eighteenth century. At times this growth was interrupted by disputes with France over the fishing rights near her Canadian colonies, for this was one economic source of friction with that country. French control was largely eliminated in 1763 when England secured the remaining French possessions, excepting two small fishing islands; and by the decade preceding the Revolution it was estimated that New England had over 10,000 men engaged in the fisheries and that their annual yield was worth some \$2,000,000. The best grade of fish exported was sent to the Catholic countries of southern Europe and the lowest grade found a market in the West Indies, where it was used to feed the slaves. The chief products of the whale, oil and spermaceti, were in universal demand at a period when oil and candles furnished the chief means of illumination, and the fashions of the day created an excellent market for whalebone.

In addition to these products the fisheries were of importance as a factor in the development of colonial shipping, both that directly engaged in fishing and that in the export of the dried and salted fish; some 350 vessels alone were employed for the latter purpose by 1770. This, together with the large body of trained seamen developed, was also of aid when in subsequent years the country found need for a navy.

Wild Game. Besides the fish obtained along the Atlantic coast the interior lakes and streams generally afforded a fairly abundant supply, but this source was used only to meet the household needs of the fishermen who caught them. The inland woods also had an abundance of wild game which was sought by the hunters and trappers: deer, bears, beavers, and the wild turkey being the most important. The deer, bears, and turkeys furnished meat and deerskins were an important element in the clothing of the frontiersman. The furs, notably that of the beaver which

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was used to make hats, were the most important and valuable product of these animals and the only product outside of deerskins that entered extensively into trade and commerce. In the slack winter months farmers of the back regions often diverted some of their time to hunting and trapping; a small group among the frontiersmen made this their main pursuit.

As settlements advanced into the interior the available supply of fur-bearing animals was rapidly depleted so that more dependence had to be placed upon the furs obtained by way of trade with the Indians. New York took the lead in this fur trade, since the Iroquois of that region were more friendly to the English than were the other tribes. During the eighteenth century even this source of supply was declining and increasingly the fur trade passed into the hands of the French as the supplies had to be obtained from beyond the Alleghenies where Frenchmen were largely in control until 1763.

Mining and Related Extractive Industries. Mineral products outside of iron played little part in the economic life of the colonies. A little copper was obtained from a mine in Connecticut and lead was found near the small settlements on the upper Mississippi. Coal remained practically unused. The iron resources began to be developed almost from the start. The Virginia Company in 1621 sank £4,000 or more in a plant on the James River, but it was destroyed by the Indians before any iron was produced and no further attempts were made in that colony before the end of the century. The first successful attempt to make iron was started at Lynn, Mass., in 1643, where a furnace and forge were built for about \$5,000, with a capacity of some eight tons a week. The chief ore used here, as in most of the other furnaces that sprang up along the coast from Massachusetts to New Jersey, was bog ore. It was cast into hollow ware such as pots and kettles or into pigs subsequently forged into bars and other shapes. Later rock ores derived from the hill regions from Connecticut south to Virginia were developed and made possible the growth of a considerable industry in the middle colonies in the course of the eighteenth century. Clay suitable for brick-making was found in many localities, but brick was not extensively used except for the more substantial buildings and better homes, chiefly in the seaport cities, when the near-by timber supply grew scarce. Clays suitable for pottery were also used and, in some places, where the proper sand and lime were found, glass was made. The quarrying of stone for building purposes was seldom undertaken, but some stone suitable for grist mills was made use of.

CHAPTER VI

MANUFACTURING INDUSTRIES IN THE COLONIES

Introduction. Under the term "manufacturing," though no sharp line of division can be drawn, we include those industries engaged in turning the crude products of the extractive industries into more highly finished products regardless of whether this was carried on in the household, in the shop of the craftsman, or in a plant or factory. As was stated in connection with the chapter on the extractive industries, it should be borne in mind that the conditions of life in the colonies were such that few individuals devoted their energies exclusively to one line of economic activity; this applies to manufacturing as well as to other activities. A great deal of manufacturing was carried on by the individual along with various other lines of work, chiefly the extractive industries; in the towns and cities, largely, people made it the sole means of earning a livelihood. In consequence there was no such large specialized group engaged in manufacturing as we are familiar with today.

In order to explain the causes for the establishment and growth of manufacturing industries in the colonies it is necessary, as in the case of any economic activity, to understand (1) the underlying economic conditions, which are by far the most important factors in determining the course of development and (2) what may be called the more artificial conditions, such as legislation or other social action, designed to stimulate or retard growth. These two groups of factors will be taken up in the order named.

Underlying Economic Conditions Determining the Growth of Manufactures. In manufacturing as in any other line of industry, the relative importance of the four agents of production—natural resources, labor, capital, and business management—combined with an abundant and cheap supply of these agents, especially those that are most important in producing the particular commodity, is the first of the underlying economic conditions to determine the growth of the industry. A second condition is made up of all those factors that determine the extent and character of the market available from the place where the industry is located. These conditions are the first things that a businessman would study in determining the location of a manufacturing industry.

The economic availability or supply of natural resources for a manufacturing industry, unlike the extractive industries, does not always

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mean the actual existence or production of supplies of that raw material in the vicinity of the manufacturing plant, though generally speaking this is the important and usual condition. However, if the raw material is one that can be transported to the plant so that, including the costs of carriage, it is available at a relatively low price, the industry may be said to have the advantage of a cheap supply of its natural resource. The motive power employed, where it is not human labor, is among the natural resources that must be taken into account. Although today that can be supplied through long-distance transportation in the shape of coal, oil, or electricity, such was not the case in colonial times when only water and occasionally wind or animal power were employed and the plant had to be located in a vicinity where they were found. It must also be borne in mind that the importance of a cheap supply of natural resources, or of any of the other factors of production, in determining the location and growth of an industry varies greatly among the different lines of manufacturing.

The best measure of the importance of any one of the agents of production in a given industry is the proportion that the cost of this agent makes up of the price at which the product is sold in the market. Thus, if most of the selling price is due to the cost of the raw materials or the power used, then the presence of a cheap supply of natural resources is a vital factor in determining the location and growth of an industry and may even prove more than sufficient to offset a high cost of labor or capital. Similarly, if the cost of the labor or capital required to produce a commodity makes up most of its selling price, then a cheap supply of either agent becomes the important factor and may more than offset a high cost of raw materials or power.

This explanation is summarized by economists in what is called the law of comparative costs, namely, that in regions between which trade exists each region or nation will tend to specialize in the production of those goods entering into trade in which it has the greatest comparative advantage. This principle underlies all specialization and trade. It will be noted, however, that it has been assumed that trade is economically possible, that the markets for the given commodities are more than local markets. Such is not always the case, and it is therefore necessary to consider the second group of economic conditions mentioned, those determining the market, before we complete the analysis of the economic factors determining the location and growth of manufacture.

That the size and character of the market are important factors in determining the location and growth of manufactures is obvious on a moment's thought. In the first place, some commodities by their very nature have to be produced at or near the place where they are consumed. In the second place, although other products may be physically of such

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a nature that they can be transported great distances, still it may be economically impossible to do so unless the costs involved are low and the addition to the selling price thus necessitated is not great. On the other hand, there are many commodities which it is physically impossible to produce except in certain localities. If the demand for such commodities elsewhere is strong, they may be carried to distant markets even though transportation costs make up a very large proportion of the final selling price. Although the transportation cost is usually the most important factor in determining the geographical extent of the market for commodities, it is not the only one, for easy means of communication enabling buyers and sellers to get together are also important. Similarly a sound monetary and banking system facilitating the methods of payment and any other factors promoting an efficient market or exchange and tending to reduce marketing costs play a part in determining the size of the market.

Thus, other things being equal, low costs of transportation and efficient marketing facilities will widen the area within which a given product can be sold and industries will tend to be located and grow in that portion of the area that provides the most economical combination of the factors of production. Conversely, if the conditions are such that the market area is small, the commodities will have to be produced, if at all, in many scattered localities; specialization in one locality is impossible. Thus we see the reason for the general principle that specialization or division of labor is limited by the extent of the market. It should not be overlooked, however, that the market for a product is not simply a question of the geographical area within which goods can be economically shipped. It depends also upon the number of people within that area who have the means and inclination to buy the product. Thus there may be a fairly large market though the extent of its area is relatively small, as in a modern city.

The size of the market is of importance particularly in the localization and growth of manufacturing industries in another way. It is frequently found in manufacturing that up to a certain point the larger the output of a plant or concern the lower the cost per unit of product. This is due to the fact that there are many elements in the cost of production that do not increase in proportion to the increased volume of output. Thus, if the output is doubled by running night as well as day shifts, such elements in the total outlay as local taxes, the salaries of the chief officials, the advertising expense, or the interest on the cost of the land may remain practically the same, and the outlay for building or machinery is never doubled. This is most frequently the case in an industry where the conditions of production are such as to require a considerable investment in the way of plant and machinery whether the output is large or small.

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The interest on this investment is one of the items of cost generally spoken of as the overhead or fixed charge and, being at least relatively fixed in total amount, the portion charged against a unit of product decreases as the quantity of the output increases. Where the situation in a given industry is such that the total of all the factors entering into costs shows a decrease per unit of product as the output increases, the industry is said to be operating under the law of decreasing costs or increasing returns.

It is obvious that no concern will attempt to produce on a large scale so as to take advantage of the lower costs unless it also has a large market in which it can sell its greater output. Nobody would put up a shoe factory to produce only 1,000 pairs of shoes a year; the cobbler's methods would be cheaper. But if there is a market for 1,000,000 pairs, the factory method would produce cheaper shoes and the cobblers would be driven out of business. This illustration suggests that in an industry where there is a large market and the law of increasing returns is in operation the industry will tend to be concentrated in large plants in one locality instead of being scattered, and the locality chosen will tend to be one offering the most economical combination of the factors of production.

Bearing in mind this explanation of the two groups of fundamental economic conditions that determine the location and growth of manufacturing industries, we can now turn to an examination of what the actual conditions were in the colonies and how far they were favorable or unfavorable to the development of manufacturing.

Economic Conditions in the Colonies as They Affected the Growth of Manufactures. It is a characteristic of manufactures in general, as contrasted with the extractive industries, that either labor or capital or both constitute a relatively large proportion of the total cost of the product. Therefore, as previously explained, a cheap supply of these agents of production is more essential to the successful development of such industries. In the colonies both of these factors were scarce as compared with Europe and thus constituted a serious economic obstacle to the growth there of manufactures producing the type of goods that required relatively large amounts of these two agents and that could be cheaply imported. The scarcity of capital, however, was not so serious a drawback in those days as it would be today for the reason that not much machinery was employed and the plants used were comparatively small; accordingly, the amount of capital required in most industries was very much less relatively than would be the case today. Furthermore, the slight use of capital in the form of plant and machinery meant that conditions favoring large-scale production to take advantage of increasing returns were much less common and so a large market in which to dispose

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of a large output was not nearly so essential to the success of a manufacturing plant in those days as it would be today.

These very facts, however, resulted in making labor more important; for machinery is essentially a labor-saving device and more labor is required where it is not used. Not only did they result in a greater use of labor, but they also increased the need for skilled labor; for, under modern machine methods, relatively unskilled labor can often do work with the aid of machinery that only a skilled artisan could turn out with the simple machines or tools of the colonial period. Yet skilled labor was particularly scarce in the colonies. It has been estimated that unskilled laborers in the colonies were paid wages about one-fourth higher than were paid in England; in the case of skilled artisans the wages were often one-half higher. Moreover, when this higher wage of artisans in the colonies was combined with their lower average of skill, it resulted in a labor cost about twice as high as in England. We may well conclude therefore that the scarcity of labor, and particularly of skilled labor, was the most important single factor tending to check the growth of manufacturing industries in the colonies.¹

There were certain conditions, however, that sometimes helped to offset the scarcity of labor and were not without significance both in effect and as illustrating an important economic principle. Where a family was primarily engaged in farming, the work, being seasonal in character, did not occupy all the men's time throughout the year; nor did the regular household duties together with such work as they did in the fields require all the time of the women. In the slack winter months the men might turn to hunting and lumbering; but the growing scarcity of wild animals and the limited market for lumber in most localities often meant that even these activities failed to provide full employment for the men and they were not open to the women. Thus idleness and a loss of earnings arising from the time that might be devoted to productive work faced them. To be sure such time might have been used for the enjoyments of leisure; but the ambitious, thrifty, and puritanical spirit of many colonists did not favor such a choice, and idleness, except on the Sabbath, was severely frowned upon.

Under these conditions the members of the household would turn to manufacturing such products as their skill and the available raw materials made possible; these products might be turned out in a quantity greater than was needed to supply the household wants if there was any market for them. Since the time employed in this production would otherwise have been lost, economically speaking, in idleness, the family looked upon the labor involved as costing them practically nothing. Under such

¹ CLARK, V. S., "History of Manufactures in the United States," vol. I, pp. 156-158, New York, 1929.

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conditions the high cost of labor in the colonies was no serious obstacle to the growth of some lines of manufacturing; and the colonial household often found it more economical to manufacture products which it was perfectly possible to import, and which it would have been more economical to import, had the family been obliged to reckon the labor required as an appreciable element in the costs of production. Commodities produced under such conditions, where one or more of the factors of production whether raw materials, labor, or tools can be reckoned as costing little or nothing because most of the cost can be charged against some other more important commodity produced in connection therewith, are known as joint products or by-products. In many lines of industry this is an important factor in their location and growth; in colonial times the production of various lines of manufactured goods was made possible because they were by-products of farming.

As far as the agent of production called "business management" is concerned, although it is difficult to judge accurately, there is not much reason to suppose that the colonies were under any marked disadvantage in this respect. With the small scale of production and the relatively simple tools and processes that characterized most lines of manufacturing in colonial times the required skill in organization and management of a business was not nearly so great as would be necessary in a large manufacturing corporation today. As in so many fields of activity, division of labor had seldom been carried so far as to develop a group of men who could be said to have specialized in business management. The person in control of a business, usually the owner, was also a worker and put in more time as such than in planning the details of management, for they were bound to be simple where the whole organization of industrial society was as simple as that of the colonies.

The obstacles just described, however, were not insuperable in all lines of manufacturing for, as has been explained, manufactured products vary greatly in the relative importance of the different agents of production that determine the total cost; a marked advantage in a cheap supply of one agent, provided that agent makes up a relatively large portion of the total cost, may more than offset disadvantages arising from the high cost of the other factors. It was only in the case of one of the factors of production, natural resources, that the colonies possessed, generally speaking, a marked advantage in cheapness of supplies. Such conditions were most commonly found among the cruder and less highly finished manufactured products involving a relatively small amount of labor. In these industries we might therefore expect to find the colonists meeting with some success in manufacturing, even when they had to face competition from other countries; for it should be noted that thus far our discussion has not assumed a limited market. That this conclusion is

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justified by the facts will be seen when we come to an account of the actual development for, almost without exception, the manufactured products that were developed and produced for a market outside the colonies, such as lumber products, naval stores, ships, salted meat, and fish or rum were made under these conditions.

But, as was just suggested, we have not yet considered the conditions existing in the colonies in that second group of underlying economic factors affecting the growth of manufactures which determined the extent and character of the market for these products. Here the outstanding fact was the very limited extent of the market available for most of these products. Numerous factors, most of which will be described in more detail elsewhere, contributed to this result; but doubtless the most important were the conditions that made the costs of transportation so high. The importance of this factor was further increased by the fact that, as already explained, other conditions were such that a large proportion of the products of colonial manufacture were commodities that were not highly finished and hence were of considerable bulk in proportion to their value. Generally speaking, commodities of this type cannot easily bear heavy costs of transportation and so have a limited market area. In colonial times the difficulties of transportation overland were so great that few bulky commodities could be carried any appreciable distance. Hence, in the interior or frontier settlements, it was necessary to manufacture such products in the locality if they were to be had at all. In the regions possessing easy access to navigable streams or to the sea the relatively cheap water transportation made other colonial or foreign markets economically available; this greater extent of available market tended to further the development of manufactures enjoying otherwise favorable economic conditions in such regions. It should be remembered, however, that in those days even water transportation was expensive as compared with today, for only the relatively small sailing vessel was available and the great risks made the costs still greater.

In addition to the difficulty arising from high transportation costs the market was limited by the relative scarcity as well as the limited purchasing power of the population in the colonies and by all the other conditions that prevented the growth of a well-ordered market organization; included were the difficulties of communication and a poor system of money and credit which put obstacles in the way of the financial arrangements necessary in the sale of goods.

Although this situation was typical of the colonial period as a whole, the developments that took place during that period helped to widen the markets. Thus the growth of population and the increased wealth of the people tended to increase both the number of those who wanted to buy, and of those who could buy, manufactured products; the same con-

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ditions existed in the case of goods finding a market in the rapidly growing West Indies. Also, such improvements as took place in the means of transportation or communication and other facilities for exchange helped to lessen the obstacles that limited the market.

From this account of the conditions that tended to limit colonial markets it will be seen that they might affect the growth of different lines of manufacturing in the colonies in two opposite ways. In the case of industries where the other economic conditions gave the colonies a relative advantage over outside regions, the conditions which limited the market, though not precluding growth, would prevent that growth from being as great as would otherwise have been the case; in the case of industries where the other economic conditions were not favorable as compared with outside regions, the limited market, by shutting out the products of such regions, would force the colonists to manufacture for themselves in each locality or else go without the product altogether. It was this latter situation that was chiefly responsible for the scattered but widespread growth of many lines of manufacturing throughout the colonies.

Artificial Aids to, or Restrictions on, Colonial Manufactures. The preceding account of the underlying economic conditions affecting the growth of manufacturing in the colonies will largely explain the character of the measures resorted to in the effort to stimulate various industries for, of course, such measures were devised so as to lessen or overcome the obstacles that tended to check that growth. In describing these measures we will take up (1) those originating in action on the part of the colonies and (2) those emanating from Great Britain.

As was to be expected, practically all the measures originating in the colonies were designed to stimulate manufactures, rather than to restrict them. The scarcity of labor, particularly of skilled artisans, has been shown to have been the most serious obstacle existing; but that was not easily overcome. Such things as the colonies did to induce people to emigrate from Europe helped to augment the labor supply but most of it was at once diverted to agriculture. The colonists often sent over special requests for artisans of one type or another and indentured servants skilled in some craft were highly prized; yet, when their term of indenture expired, many preferred to take up farming rather than follow their craft. In the early period some colonies even passed laws trying to compel people to follow their own craft instead of engaging in husbandry or, taking the opposite tack, offered an inducement to mechanics and factory workers by exempting them from personal taxes or public service. Perhaps the most important measures were those connected with the industrial education of the young, particularly the regulations concerning apprenticeship. In those days training for some useful line of work took a far larger proportion of the time given to children's education and the

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general cultural subjects far less than is the case today; for instruction in the latter seldom went much beyond a rather elementary knowledge of the three R's, reading, 'riting, and 'rithmetic, so far as most children were concerned.

The scarcity of capital was sometimes overcome by a public loan made to secure the establishment of some enterprise or a grant of land, this latter being common among the New England towns that possessed town lands. In other cases lotteries were authorized to help raise the necessary funds.

In the case of industries where the raw material required was scarce, bounties were given or other measures devised to encourage its production. This was especially common in the case of the textile fibers, wool and flax. Such raw materials might be exempted from taxation and sometimes a high duty or even prohibition was placed on their exportation in the hope that this would necessitate their being worked up in the colonies before being exported.

In addition to the measures specifically designed to counteract the scarcity of one or another of the factors of production there were those of a more general character. Such included the bounties, premiums, or prizes given for the finished products, the exemption of plants from taxation, or the occasional monopoly granted a plant in some locality. The duties on the importation of foreign manufactures levied in many of the colonies also helped the local industries; though these duties were generally low and, being designed chiefly to yield revenue rather than to afford protection, they were not important in effect.

British Aids and Restrictions. The regulations of Great Britain affecting colonial manufactures were designed in some cases to aid and in other cases to check development. They are to be understood in the light of the ideals of the Mercantile System which sought to secure from the colonies raw materials or finished products not produced in England and looked with disfavor on the development in the colonies of lines of manufacturing that would compete in the colonial market with English products. The first British law directly restricting colonial manufactures was passed in 1699 and forbade the export of wool, woollen yarn, or woollen cloth from one colony to another or to foreign ports. Since the supply of wool in the colonies was always deficient and large quantities of woollen cloth were imported from England, there is no reason to suppose that this act had any appreciable effect in checking the growth of this industry; it may have interfered at times with shipments between the colonies. In 1732 a similar prohibition, for the benefit of English manufacturers, was placed on the export of hats. This probably checked what was a lucrative, though not important, manufacture; but the falling off in the supply of beaver skins in the following years was also a retarding factor.

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A law of much greater import was the Molasses Act of 1733 levying a prohibitive duty on the importation of molasses from the foreign West Indies. The product obtained from the French West Indies was cheaper than that obtained from the British possessions and was extensively used in the manufacture of rum which was rapidly developing in the eighteenth century. This law, however, was seldom enforced and did not prevent a rapid growth of the industry. Probably the most important restriction was an act of 1750 which prohibited the erection in the colonies of any more slitting or rolling mills, tilt hammers, and steel furnaces. The same act, however, offered a stimulus to the production of iron by admitting pig iron into the English market free of duty and by allowing the free import of colonial bar iron at the port of London, a privilege extended to other places in 1757. Although the casting of iron was still permitted and the exports of pig iron increased, this prohibition on new plants was most obnoxious, though the previously existing plants apparently increased their output and the prohibitions were poorly observed.

In addition to these direct restrictions there were various laws which in an indirect way tended to check the growth of colonial manufactures. The more important included the British duties on imports of colonial manufactures and the reductions in English export duties or the remission of English import duties on European manufactures reexported to the colonies so as to make it possible to sell such goods in the colonies at lower prices. In addition England imposed restrictions on the free emigration of skilled artisans in 1718, more specifically applied to those in certain textile industries in 1750; she also forbade the export of certain machines or tools used in these industries starting with the stocking frame in 1696, adding implements used in the wool and silk industries in 1750, and those employed in the cotton and linen industries in 1774. It may be doubted whether any of these restrictions had appreciable effects. Also England sometimes disallowed colonial laws designed to stimulate manufactures, though the effects were insignificant.

As opposed to these restrictive measures there were acts and regulations that tended to stimulate certain lines of colonial manufactures. Doubtless the most important were the provisions of the Navigation Acts, which included colonial-built and -owned vessels. Under the favorable economic conditions that existed, shipbuilding started at an early period and became one of the most important of colonial manufactures; many ships were sold in England and by the time of the Revolution it was estimated that nearly one-third of the British-owned shipping was of colonial build. Had it not been for this opportunity to share in the substantial monopoly of British commerce which the Navigation Acts gave to British shipping, there would have been only a very limited market

for colonial-built ships. Closely connected with this industry were the bounties which Great Britain gave on the production of various naval stores such as pitch, tar, hemp, masts, and spars. These bounties, begun in 1705 and designed to lessen England's dependence on such supplies from the Baltic countries, were continued with little interruption almost up to the Revolution. Except in the case of pitch and tar, the effect on the development of these industries was slight. For the most part such bounties as England granted the colonies on these or other commodities were designed to increase the supply of some scarce raw material, and such effect as they had was felt more in the extractive industries than in the cruder forms of manufactured products.

Concerning the general effect of either colonial or British regulations upon the development of manufacturing industries in the colonies, it may at once be said that they were not a very important factor in the results obtained. The underlying economic conditions dominated the situation. Aside from those conditions favoring the widely scattered small concerns producing for a local market, the general situation was not favorable to the growth of most manufacturing industries. The meager results attained under the various aids or restrictions only furnish one of the numerous lessons of economic history showing the great limitations on the effectiveness of such legislation when the underlying economic conditions that it seeks to counteract are unfavorable.

The Technology and Organization of Colonial Manufactures. The outstanding features in the technology of colonial manufacturing industries were the small number and the simplicity of the tools, machines, or plants used and the very great dependence on human effort for power. The character of the tools or machines employed and the degrees of skill required were important factors in determining the distribution and growth of the different industries as well as in shaping the character of the organization under which they were carried on. We can distinguish three different types of organization that developed out of the varying economic and technological conditions existing in the numerous lines of manufacturing: the household industries, the workshop crafts, and the industries using a considerable plant either in employing power or more elaborate machine methods.¹

In the case of products where only simple tools were used and no great skill or technical knowledge was needed, they were extensively made in the household or on the plantation. Thus spinning and weaving of linen or woolen, and less frequently of cotton, cloth were common in most households. A little lumbering and carpentry and the production of many household utensils were customary. The farmer did his own slaughtering, curing, or salting of meat to supply the household needs, and

¹ *Ibid.*, pp. 159-193.

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tallow, soap, lard, and candles were by-products of this activity. Less frequently the manufacture of nails or the preparation of potash and leather, combined perhaps with the production of shoes or deerskin clothing, formed a part of the household output. Although this suggests only the most important industries, numerous other products were turned out. The household industries being so widespread it is evident that the total volume of the output must have made up a very considerable portion of all colonial manufactures. Though most of these products were consumed in the household or on the plantation, there was sometimes a surplus which was disposed of in such markets as were available. For the most part these industries were a part of the simple self-sufficing household economy.

In the case of the handicraft industries where simple, light tools were employed and skill in workmanship counted for more, a greater degree of specialization existed. Little was required in the way of capital since the tools were inexpensive; the workshop was usually located in the artisan's home; the stock of raw material carried was small, for this was often furnished by the customer himself; and, since much of this work was done to order, the supply of finished goods on hand, if any, was slight. The craftsmen who carried on their work in this way included cobblers, weavers, hat makers, watchmakers, carpenters, masons, coopers, ropemakers, cloth dressers and dyers, soapmakers, tallow chandlers, metalworkers, tailors, printers, saddlers, and numerous others of less importance. On the larger plantations the volume of work to be done necessitated the keeping of various craftsmen, who were usually trained slaves; often they turned out surplus products which were sold on the market.

Where the population was so sparse that the local market did not provide enough work to support an artisan, he sometimes became an itinerant worker going about from house to house with his kit of tools and possibly some raw materials and living with the family until he had finished such work as was required. Such a practice was common among the cobblers and carpenters. In other cases, where the market was limited and the industry or products of such a character that itinerant work was impossible, the artisan was forced to eke out his living by small-scale farming or some other side activity.

On the other hand, in localities where the market was extensive, it might provide full employment for two or more craftsmen. Under such circumstances we find some of these industries developing a more elaborate form of organization. Thus a master craftsman might employ other workers in his shop, possibly both apprentices and journeymen; as this necessitated a larger workshop, more tools, and more raw materials, a larger amount of capital was required. He might also find it worth while to keep a fair stock of finished goods on hand which made possible sales in

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considerable quantities; so in a small way he started a wholesale trade along with his retail or custom trade.

In some of the larger trading cities a still more elaborate organization developed in certain of these craft industries, the shoe industry of Massachusetts just before the Revolution being a notable example. There the craftsman adopted the practice of hiring others in the neighboring region to work for him. He supplied the raw materials and sometimes the tools, the work being done according to the craftsman's specification in the homes of workers at such times as they chose, and then the finished product was returned to him. This form of organization is generally known as the putting out or domestic system of industry and, though not very common in the colonies, it had an extensive development in Europe. Its economic basis was the fact that the work so done was cheaper, the labor required being often a by-product of the household or farm economy. The difficulties involved arose from the fact that such labor was seldom very skilled and it was not easy to supervise the work so as to secure good quality and prompt delivery, and prevent waste. It should be noted that the craftsman who developed such an organization of his business functioned as an entrepreneur or business manager, a capitalist, a trader, and a laborer. However, as his business grew in size and required more time for management, he ceased to work at the craft himself and so became a merchant-capitalist-entrepreneur. This marked a step in advance toward division of labor or specialization of functions and so tended to create a class of employers distinctly separate from the hired workers.

The third group of industries in the colonies was that where the technical methods employed involved the use of considerable machinery or a plant. The processes used might be comparatively simple, as in the case of a grist mill or lumber mill, or they might be fairly elaborate and require considerable technical knowledge, as in the manufacture of glass or paper. In any case such industries required a fair-sized market in which to dispose of their product or it would not pay to erect a plant. If the product could not be economically transported for some distance, then the market had to be a local one and, since in most sections the local markets were small, it was only in the case of industries producing a commonly used, bulky commodity that it paid to build such plants. This explains the numerous and widely scattered mills for grinding grain, sawing lumber, fulling cloth, breaking hemp, making cider, or the whiskey distilleries, tanneries, and iron forges. The availability of water power was of course a factor in determining the location of mills, though wind mills were not uncommon; but only the brooks or smaller streams and sometimes the tides were used for this purpose and such sites were numerous. Often a group of mills, clustered around a favorable site,

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became the nucleus about which settlers gathered and, in the case of the best power sites, eventually developed into large manufacturing centers.

Where the character of the product or the conditions were such that a large market was available, we find some lines of manufacturing developing on a greater scale and tending to locate in a few places, chiefly the large seaports, instead of being widely scattered. It was under such conditions that the shipbuilding industry, the manufacture of various naval stores, some of the larger breweries, whiskey or rum distilleries, meat and fish packing and lumber plants developed. All of these enjoyed the advantage of foreign as well as domestic markets. It was in such industries that the colonial manufactures reached a type of development most nearly resembling that of modern times. Here too the capital investment involved was greater. The Hasenclever ironworks built in New Jersey shortly before the Revolution, which is supposed to have been the largest manufacturing establishment in the colonies, represented an investment of some \$250,000; the outlay in connection with the Principio Company's ironworks in Virginia and Baron Stiegel's glassworks in Pennsylvania was not far from this sum. In such concerns, therefore, the problem of securing the necessary capital was important and affected the form of business organization. In the case of the three concerns just mentioned most of the capital was obtained in England or Germany and this was frequently true of the largest colonial enterprises. In most cases, however, the capital was obtained from local sources, private funds sometimes being augmented by public aid. Where a single individual lacked sufficient means, partnerships were organized, and this was the usual form adopted by the larger concerns. The device of the corporation as a means for securing large amounts of capital for such enterprises seems to have been practically unused during this period.

Aside from the acquisition of an adequate supply of skilled labor, capital, and the requisite technological knowledge, the problems connected with the organization and management of manufacturing industries in the colonies were relatively simple; but some explanation of the character of the risks involved is desirable. As there were practically no means for securing insurance against losses by fire, disasters of that sort often fell with crushing weight upon these enterprises. It was for this reason that in cases where an industry was especially important in supplying a local necessity, aid was often invoked in the form of a public grant or the authorization of a lottery to provide the funds to rebuild the plant. There were innumerable instances where the absence of adequate facilities for meeting the risks incident to such disasters abruptly terminated the existence of a concern. The risks and losses incident to changes in technological processes and the introduction of new inventions were doubtless less important than today, for new methods were being intro-

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duced only slowly at this period. Still there were cases where ignorance of known processes or experiments with new methods sometimes involved heavy losses.

The risks arising from fluctuations in the market price of the product obviously varied greatly in different industries. The household manufacturing goods for its own use had no concern over prices and, even where it produced a surplus for sale, the amount was so small that it had little effect on the family income. Similarly, in the case of those producing for a local market, there was relatively little risk, for prices in such markets were comparatively stable and it was easy to estimate the demand; the stock of raw material or finished goods kept on hand was seldom larger than was thought to be required in the immediate future. The prevalence of custom orders where prices were fixed in advance of production also lessened such risk. It was in the industries producing on a large scale and for more than a local market that the risks arising from fluctuations in prices were greatest. In such cases the slow and inadequate means of communication made it difficult to forecast market conditions and prices, particularly those in foreign lands, and so adjust the output in relation to the demand as to ensure sales at prices yielding at least a reasonable profit. The result was that, if a manufacturer happened to offer his goods for sale at a time when there was a scarcity in the market, he reaped large profits, but if the market was glutted he might have to accept heavy losses. The frequent wars of the period added to the uncertainties and, in the colonies, the fluctuations in the value of the money in circulation and in the rates of foreign exchange tended to accentuate the fluctuations in prices.

It should be remembered, however, that one characteristic of colonial manufacturing helped to lessen these risks. The relatively slight use of machinery and the few large manufacturing plants made the process of production not only simple but one that did not involve a long period of time. In modern manufacturing industries where, before a product can be turned out, it may be necessary to make machines to make other machines to make still other machines before a plant is ready, the complete process—often called the “roundabout” process—may involve a long period of time. It thus may be necessary to plan several years ahead and this long period of time increases the difficulties in estimating the probable market conditions and prices at the time when the final product will be finished and ready for sale. The shorter period of time involved in the simpler methods of colonial manufactures helped to lessen the risks arising from this situation.

The Growth of Colonial Manufactures. The preceding discussion of the conditions affecting colonial manufacturing industries will serve as a basis for explaining their existence and development. But the growth that

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actually took place can only be described in vague and general terms, for it has to be based on very inadequate evidence, much of which is circumstantial, as satisfactory statistics are entirely lacking.

In the case of the household industries it seems probable that they grew almost as rapidly as the population. This was a product of the necessities of the situation that confronted most of the population, especially the portion that established the settlements in the interior and away from tidewater. It may be assumed, however, that in the larger towns and seaports there developed in time a considerable group who obtained in the markets an increasing proportion of the commodities elsewhere supplied by household industries; though few families there, even among the well-to-do, did not make something in the way of clothing, linen, prepared food, soap, candles, etc., to help supply the family needs.

In those manufacturing industries chiefly supplying local needs it might also be said that their growth tended to keep pace with the growth of the population. As the scattered population on the frontier increased in density and small groups developed into villages and towns, gristmills, lumber mills, fulling mills, and stills were built and carpenters, cobblers, tanners, dyers, and similar craftsmen set up their shops and began to ply their trade.

In the group of manufacturing industries which supplied more than a local market, growth was not limited by the increase in population and was stimulated by all developments that tended to widen the market for the product. In this group, too, instead of being widely scattered, the different industries showed more of a tendency toward localization in the regions where the underlying economic conditions were relatively favorable.

Probably the most important industry in this group was shipbuilding. This industry had started as early as 1631 in both Massachusetts and New York. Early in the eighteenth century shipbuilding was established on the banks of the Delaware River; still later the Carolinas began to build on a small scale. But throughout the period New England remained the chief seat of the industry, particularly the section from Massachusetts Bay north to Maine, where the supply of shipbuilding timber was most accessible. By far the greater portion of colonial-owned ships in the fisheries and the carrying trade was built there. Furthermore, as the cost of ships in the colonies was generally less than in England, though there was some question whether the timber used was as enduring, the colonies, aided by the protection afforded by the Navigation Laws, were able to sell their ships in England. Thus favored, the industry had grown so that shortly before the Revolution it was estimated that the colonies were selling between 50 and 100 ships a year to England and nearly a third of the British shipping in the general trade was of colonial build.

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The manufacture of lumber products, also chiefly dependent on the timber resources, was generally conducted on a small scale, even when producing for more than a local market, and hence developed in most of the colonies. The chief branches were the manufacture of staves, barrels, shingles, and house timber. In addition to the rapidly growing colonial markets, which developed with the increased exports of products requiring casks and barrels for shipment, there were the markets of southern Europe and the West Indies; the latter also became the chief foreign market for shingles and house timber. The manufacture of all of these products increased at a rapid pace, especially in the eighteenth century. Much less important was the manufacture of pitch, tar, and turpentine, mainly located in the Carolinas, which developed in the latter part of the colonial period. Also less important, though rather widespread and often among the surplus products of the household industry, was the manufacture of potash and pearlash, much of the output of which was exported to England.

What may be called the packing industry became at an early date one of the important manufactures of this group. There were two main branches, the packing of meat, chiefly beef, and of fish. In the absence of modern methods for keeping such products fresh they were either salted and pickled, or dried and smoked. The packing of fish for other than local markets was concentrated on the New England coast and the markets of southern Europe and the West Indies furthered the steady growth of this branch of the industry which provided one of the most important exports of this region. The packing of beef and pork was chiefly located in the middle colonies and developed slowly, for it was not until after the first of the eighteenth century that packing for export to foreign markets became important. Then the growing farm population began to drive their livestock in increasing numbers to New York or Philadelphia and, still later, to Baltimore. As the uplands of Virginia and the Carolinas were settled, livestock from that section began to come to Baltimore and Philadelphia; the region about Charleston, which had previously bought such provisions from the middle colonies, was then able to obtain them from the neighboring upland settlements and in sufficient quantity to provide some surplus for export.

Closely connected with the packing of livestock were the tanning of leather and the manufacture of soap and tallow candles. Although these products were very common among the household or local manufactures, they began to be turned out for more than a local market as increasing supplies of the raw materials became available as by-products of meat packing, so that in the eighteenth century small quantities were being produced for the export trade as well as for the growing city markets.

Another industry, engaged in the preparation of food products and developing out of a household or local industry in the seacoast ports so

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that it became one of the most important among those producing for a large market, was that engaged in grinding flour and baking bread or biscuit. This industry also, as far as it was producing for more than a local market, was concentrated in the middle colonies, notably in the vicinity of New York, Philadelphia, and Baltimore, and developed rapidly with the spread of the farming population in that section and the upland South. Although the plants engaged in this manufacture were probably not large, it is evident that in the neighborhood of these cities they must have been very numerous, since in the period just before the Revolution the value of the exports of flour and bread was much greater than that of any other colonial export except tobacco and considerably exceeded that of the exports of wheat. The exports went chiefly to southern Europe and the West Indies, but the demand for ship supplies was considerable and sometimes the other colonies secured supplies here, notably the Carolinas in the earlier part of the eighteenth century and later some of the New England colonies.

In the latter part of the colonial period the manufacture of pig and bar iron began to turn out products for more than the local markets. The plants were chiefly located about the ore deposits from southern New York to Virginia with a few in Massachusetts, and occasionally attained considerable size. The British act of 1750 admitting colonial iron into England free of duty helped to develop the export trade so that by 1771 nearly 8,000 tons of pig and bar iron were exported; a much larger amount was being turned out for the colonial markets, where it was used for ship equipment, agricultural tools, household goods, etc. The casting of iron was commonly carried on in connection with the smelting of ore, but the market for the products was limited to the colonies. From about 1720 on, the growth of this industry was fairly rapid and it is estimated that by 1775 some 82 blast furnaces and 175 forges had been built, a larger number than was then to be found in England and Wales, and the total production of iron had reached about 30,000 tons. The industry, however, never reached the point where it was able to supply the needs of the colonies for all such products and throughout this period finished iron and steel products were among the most important manufactured goods imported.

The manufacture of rum is the most notable exception to the general rule that colonial manufactures were confined to raw materials produced in the colonies, since it was based on molasses obtained from the West Indies. This was obtainable at a low cost partly because it supplied a return cargo for the vessels carrying food supplies and lumber to those islands. This manufacture first began to develop on an appreciable scale around 1720, and was concentrated in the vicinity of Newport and Boston where some of the distilleries attained considerable size. The product was consumed in generous quantities among the colonists and found an

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excellent market in the Indian trade, the Newfoundland fisheries, and the African slave trade, the last alone taking nearly 300,000 gallons in 1770. A similar situation led to the rise of a substantial sugar-refining industry, though little of its product was exported.

The manufacturing industries here described were the most important contributors to the export trade in manufactured products and the fact that they were able to compete in foreign markets may be taken as indicating that they were among the strongest and most successful manufacturing industries developed in the colonies. However, there were numerous other industries that sprang up outside of the household and were chiefly engaged in supplying colonial markets which at least deserve mention. Among those that became fairly widespread were tanning and various manufactures of leather, brewing and distilling, the manufacture of agricultural implements, household furniture and utensils, and the fulling of cloth. Somewhat less widespread and often tending to be located in the larger towns and cities were printing, brickmaking, ropemaking, and the manufacture of sailcloth. Other branches of manufacturing that were somewhat more localized, often near the source of raw material, included industries producing salt, paper, naval stores, glass, earthenware, guns, and ammunition.

At the close of the colonial period, although the output of the last-named group of products was seldom sufficient to meet the needs of the colonists, the most serious deficiency that existed among manufactured products was in the textile and iron and steel industries. This is indicated by the fact that such products, particularly the finer grades, were by far the most important groups among the imports of manufactured goods at that time, and this in spite of the widespread production of these commodities that existed in the colonies.

Although manufacturing was the line of economic activity in which the colonial economy was the most backward and deficient, still, as we look back over the record of development during that period, we can see that the progress made in this field was by no means inconsiderable. Though it is true that a considerable portion of such development as occurred may be said to have been the outgrowth of the necessity for thus supplying their needs, if they were to be supplied at all, it was something that they could and did accomplish so much in this way. It was more that the colonists developed some lines of manufacturing to the point where a considerable output was exported to foreign markets, even though these commodities were relatively crude products and the success attained was based chiefly on the possession of cheap raw materials. Such achievements at least were suggestive of the potential powers in this field of economic activity.

CHAPTER VII

LABOR CONDITIONS IN THE COLONIES

Introduction. There were two outstanding facts shaping labor conditions in the colonies. The first was the scarcity of labor, which arose from the conditions that resulted in a small supply of labor and a large demand for it. The conditions determining the supply of labor will be explained later; those that created the large demand originated principally in the abundant supply of natural resources, the products of which the colonies were in a position to make economically and in the production of which a large amount of labor was required. The second fact was the comparative absence, except for the slaves and the temporarily indentured servants or apprentices, of a distinct laboring class in the sense of a group who during most of their lives hired themselves out to employers for wages upon which they chiefly depended for their living; the beginnings of such a group were to be found in the cities. This was the outcome of various conditions chief among which were the attractions of independence as a small farmer combined with easy access to cheap land and the small scale of operations, together with the lack of the clear-cut separation of the functions of entrepreneur and worker which characterized most other lines of economic activity. These conditions exercised an important influence not only on the economic but also on the social and political life of the colonists, notably in tending to develop a spirit of independence, individual initiative, and love of freedom.

The Supply of Labor. With the situation that existed in the colonies the supply of labor was especially important. Thus an understanding of the conditions that determined it is essential. These conditions were numerous but the outstanding factors in the situation determining the labor supply of a country at any time may be listed as follows: (1) the total population and the number among this total capable of doing work; (2) the number of those capable of doing work who are willing to work; (3) the length of time, in hours, days, and years, and the intensity of their work; (4) the intelligence or skill which they possess and are willing to apply in their work. Obviously, since a great variety of conditions can be named that will react on any one of these factors, we can only point out the more important among those operating in the colonial period.

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The growth of population in the colonies has already been described; in that connection it was pointed out that the scarcity of labor was one of the chief factors that compelled those interested in developing trade or great landed estates to try to induce people to migrate to America. At the same time this scarcity of labor and the resulting fact that wages were high and the opportunities to earn a living excellent provided the chief inducement for those who of their own accord migrated to the colonies.

The heavy cost of the ocean passage and the consequent development of the system of indentured servants helped to provide what, particularly in the seventeenth century, was one of the main supplies of hired labor. In addition to the voluntarily indentured there was the group of involuntary indentured servants, made up of convicts or paupers and those who had been kidnaped or delivered from jail. Convicts and paupers were sent chiefly to Maryland and Virginia, and the demand for labor was such that their service was readily bought in spite of many protests from the colonies. The supply of voluntary servants was considerably augmented in the eighteenth century through the great influx of Germans and Scotch-Irish. It has been estimated that during this period nearly two-thirds of the immigrants in Pennsylvania were indentured servants and that by 1754 there were 60,000 such in the colony. This tended to reduce the term of service that had been customary during most of the preceding century to about four or five years.

Nearly all of these servants went to the middle or Southern colonies and relatively few to New England. In the last part of the eighteenth century, chiefly in Pennsylvania, these servants, on arriving in the colonies, might be purchased by a so-called driver or peddler who sold them for their term of service through the neighboring districts, generally obtaining in the case of men between £16 and £24 apiece. Such servants, however, provided only a temporary addition to the supply of hired labor for, when their term of service expired or when they ran away, as was often the case, they for the most part became independent farmers or possibly craftsmen; this situation was facilitated by the common practice of granting those whose term of service had expired a small plot of land, commonly 50 acres, and perhaps some supplies with which to start farming.

The chief addition to the supply of workers in the eighteenth century came from the rapid increase in the number of Negro slaves. The system of slavery as it grew up in the colonies was an offshoot of the extensive system that developed in the West Indies. In part it was a product of the difficulty that white labor found in withstanding the trying climatic conditions surrounding the cultivation of certain crops, notably sugar, rice, and indigo. Doubtless more important was the difficulty in securing an adequate supply of labor for the production of the semitropical and

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tropical products for which the world was clamoring. At a period when the mobility of labor was far less than it is today, the forced labor of slaves provided the quickest and surest means for supplying this need. Furthermore, the conditions under which the great staple products of the Southern plantations were raised were such that the disadvantages attending the use of forced labor were less marked than in the case of the small diversified farms that prevailed in the North; in consequence, very few slaves were employed there, except in Rhode Island.

Finally, the moral conscience of the world had not yet been sufficiently broadened to include the black race within its scope and the teaching of the different religious sects sometimes positively upheld and seldom condemned the system. Although individual protests were heard, the New England Puritans were active in carrying on the slave trade and at the end of the colonial period the Quakers and allied sects were the only ones who had taken a fairly positive stand in opposition to slavery.

The growth of slavery in the colonies during the seventeenth century was slow. In nearly all of them there were instances of Indians being enslaved, chiefly those captured in war; but being difficult to control they were seldom satisfactory and the number was never appreciable. The first Negro slaves were brought to Virginia by the Dutch in 1619, but as late as 1681 there were only about 3,000 slaves in that colony as compared with about 12,000 indentured servants in a total population of 70,000 or 80,000. At that period there were very few slaves in the other colonies except on the neighboring tobacco plantations of Maryland. From about 1700 the importations increased very rapidly so that the total number of slaves in the colonies rose to about 60,000 in 1714, nearly 300,000 by 1754, and reached about 500,000 by the time of the Revolution. This increase was chiefly due to the demand created by the expansion of the tobacco plantations in Maryland and Virginia and the introduction of rice and, later, indigo in Carolina and Georgia. In 1776 probably 465,000 out of the total number of slaves were to be found in the colonies from Maryland southward; in South Carolina they made up nearly two-thirds of the total population. In the South they were chiefly employed on the great plantations, seldom in the upland grain-growing section, and soon greatly exceeded the indentured servants both in household service and the cultivation of the staple crops. In the colonies north of Maryland there were scarcely 35,000 slaves all told. They were most numerous, relative to the whites, in Rhode Island and New York and were largely concentrated in the vicinity of the important seaports where they were employed as domestic servants. The slaves were purchased in Africa at a cost averaging about £10 and generally sold in the colonies at between £20 and £40 varying with their sex, age, physique, and general character.

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As far as willingness to work was a factor affecting the supply of labor in the colonies, it may be said that the free population was imbued with the spirit of work to a marked degree. Climatic conditions, except in the Southern tidewater region, were generally favorable. Although some of those who came over when the earliest settlements were made had hoped to gain riches quickly and abandoned the settlements when they found that nothing but hard and constant work was in store for them, nearly all were ambitious, energetic, and thrifty. The Puritan spirit scorned idleness as a device of Satan and the ideals of religious and political freedom helped to uphold them in their constant toil. The adults took care that this same spirit was developed in their children, for the latter were put to work at an early age about the household, on the farm, or in the shop. In the earliest settlements work was a necessity, the only alternatives being emigration or starvation; even in the latter part of the period, when some had accumulated sufficient wealth to make leisure possible, few chose to indulge in this form of luxury. The absence among the well-to-do of what might be called a leisure class, such as was found in Europe, was a noticeable feature; the nearest approach to it was seen among the wealthy plantation owners of the South under the influence of slavery; even there it does not appear to have developed to the degree found later among the great cotton planters. As compared with the well-to-do families of today this spirit of work was even more noticeable among the women than among the men.

Among the unfree workers, whether indentured servants or slaves, though most marked in the case of the latter, there was little or no incentive to work or work well except the fear of punishment. This of course is always the chief defect of forced labor from the purely economic point of view; inefficiency and wasted effort as well as materials, to say nothing of the extra labor required in supervision, are inevitable accompaniments of such a system.

The hours of work about the household and plantation or in the shop were doubtless much longer than today, though in the case of farm work the difference was less marked. Not only were the hours of work per day long but the number of days per year and the number of years per lifetime devoted to work were also long. Except for the Sabbath, observed with great strictness in the Puritan colonies, holidays were almost unknown and vacations from work scarcely thought of; for most, the years of work started at a tender age and continued until failing powers compelled retirement. On the other hand the intensity with which people worked, again excepting farming, was much below that which prevails, particularly in manufacturing, today. In the absence of much power-driven machinery to force a rapid pace, the craftsman could follow his own inclination as to both the speed and the time of his work; in fact

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most of the activities of the business world proceeded at a more leisurely pace and involved a far less intense strain on all concerned than is usually the case today.

The fourth factor in determining the supply of labor mentioned is the skill and intelligence which the laborer can apply to his work. The importance of this factor naturally varies with the character of the work to be done, but it is seldom without its influence, even in the work of the common laborer; in colonial times the lack of an adequate supply of skilled labor was a constant cause of complaint and a serious difficulty. Since skill and intelligence are largely the products of vocational training and general education, our analysis leads us to inquire what the colonies did to help develop these traits.

Especial attention appears to have been given to the training of the young for some skilled craft. For the most part this was carried out, as far as boys were concerned, through the system of apprenticeship copied from England, though somewhat modified by colonial conditions. When it was settled what craft a boy was to take up—and it was very likely to be that of his father since in those days the same trade was often carried on in a family for several generations—he was apprenticed when twelve to fifteen years of age for a period of years, ordinarily until he was twenty-one, to learn a trade. The master for whom he worked and in whose home he often lived was under obligation to teach him the trade and perhaps supply him with a certain amount of clothing as well as board and lodging. Generally, too, laws provided that the apprentice should be taught to read and write and should receive some moral instruction, a feature of this system far more common in the colonies than in England. In most of the colonies care of the pauper children until they became of age was provided by this system of apprenticeship under public regulation. In the case of young girls, since there was then little prospect of opportunities for earning an independent livelihood outside of the usual household activities, the training was confined to the home, in which, however, there was a multiplicity of activities available. There were a few instances, however, shortly before the Revolution, where so-called “spinning schools” were started in which considerable groups gathered to learn this art so as to help supply the deficiency in cloth when the imports from England were cut off.

The provisions for a general education in the colonies were extremely meager and, as far as the great majority of children was concerned, were limited to instruction in reading, writing, spelling, and sometimes a little arithmetic or bookkeeping. The importance of education was chiefly emphasized by the churches, particularly as providing ability to read the Bible. This fact partly explains the more general provision for, and requirement of, some schooling in the New England towns where greater

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unanimity of religious belief existed than in the other colonies and where the close connection of state and Church made legislation on the subject easy to pass; the township system of settlement made schools more accessible and less expensive to support. As early as 1642 Massachusetts required that all be taught to read either by masters or parents and in 1647 passed a law calling upon all towns of 50 families or more to establish elementary schools and, in the case of the larger towns, Latin grammar schools, though attendance was not made compulsory. This system spread to the neighboring colonies and by 1671 all of New England except Rhode Island was under laws requiring some form of education, though there was subsequently some relaxation and the enforcement of the laws was not carried out, particularly in the frontier settlements.

In the middle colonies, where there was greater diversity of religious belief, parochial schools supported by the different denominations prevailed, and in the South the scattered population resulted in meager school facilities. The wealthier families employed private tutors and some boys were sent to England. In both the middle and Southern colonies the children of the poor were very indifferently provided for through parochial and charity schools or the elementary instruction required to be given apprentices. Private pay schools were also available in the larger places for such as could afford them. Relatively few of the colonists received much schooling beyond the elementary instruction in the three R's thus provided. In New England there were a number of Latin grammar schools that took boys from about seven to fifteen years of age, after which they were expected to be ready for college.

The first college established in the colonies was Harvard founded in 1636, William and Mary came next in 1693, and there followed Yale in 1701, what are now Princeton in 1746, Pennsylvania and Columbia between 1753 and 1755, and in the following decade Brown, Rutgers, and Dartmouth. The education thus provided was only more advanced than what is supplied today in the high school in a few subjects and less so in others. The studies were chiefly the classical languages, rhetoric, mathematics, and some ancient history, natural science, philosophy, and oratory. Furthermore, in those days a college education, such as it was, was a luxury that but few indulged in—chiefly those expecting to enter one of the learned professions such as teaching, medicine, law, and, in the seventeenth century at least, most important of all, the ministry; for most of these colleges were founded through the efforts of one or another denomination to provide the desired training for its ministers. It is evident, therefore, that the state of general education in the colonies fell far short of what we should now regard as essential for economic efficiency, even when we make allowances for the undeveloped state of the sciences and general knowledge of that time. Still the colonies were making more

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of an effort to lessen illiteracy among the masses of the people, the slaves excepted, and had accomplished more in this respect, than the countries of western Europe. In furthering this movement the scarcity of labor and the political and religious ideals were the dominant factors.

The Condition of the Laborer. The position in which the free laborer of colonial times found himself was a great improvement over that which confronted him in England or on the Continent. Of a chance to work to earn his living the skilled craftsman was always assured; this was nearly always true even of the common laborer, for in those days periods of widespread economic depression and unemployment were rare. The fact that good land was easily obtainable, in marked contrast to the situation in Europe, always provided an alternative opportunity for him to earn a living in case he was dissatisfied with working conditions. During most of our history this opportunity has been one of the chief factors in improving the condition of the working man; by attracting laborers it tended to decrease the available supply of hired labor and compelled those desiring such help to pay wages sufficiently high and to make working conditions sufficiently attractive so that men would be content to remain as hired workers instead of becoming independent farmers. The force of this influence was reflected in the laws that different colonies passed, chiefly in the earlier period, to compel skilled craftsmen to ply their craft instead of engaging in farming, though conditions generally made the enforcement of such laws impracticable.

The level of wages that prevailed in the colonies can only be inferred from the scattered figures available. It seems probable that in the case of common labor the prevailing wage, toward the close of the colonial period, was between 30 and 50 cents a day; during the eighteenth century the average tended toward a somewhat higher level than in the preceding century. Skilled artisans were generally paid between 60 cents and \$1.25 a day; in their case also the general level tended to rise. The average wage in the middle colonies was somewhat above that prevailing in New England or the South.

Although these figures seem low today, it must be remembered that the cost of living was also low so that the money wage does not measure what is called the "real" wage, that is the amount of commodities that it will buy, which of course is the vital question for the laborer. What the money wage will buy is determined by the general level of prices prevailing at any period and, although it is difficult to determine what that level was at different times during the colonial period, it has been rather roughly estimated to be about one-third or one-quarter of the level prevailing in this country during the period before the first World War. To put it the other way around, the purchasing power of the money wage was three or four times as great. We may conclude that the common

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laborer's wage enabled him to secure at least a sufficiency of the things then considered necessities; he was much better off than his fellow worker in Europe; and the skilled laborer could enjoy in addition a fair amount of the cruder comforts that then made up some of the luxuries of life. It must be remembered, however, that many things looked upon as necessities today were in those days, if available at all, classed among the extra comforts and luxuries of life.

Occasionally, chiefly in the early period, the colonies attempted to regulate wages; and it is noticeable that these regulations were all intended to keep wages down. Thus Massachusetts in 1634 limited the wages in some of the building crafts to two shillings a day and fined men for taking more, and in 1636 the towns were given liberty to fix wages within their borders. Though the fixing of wages was a common practice in England at this period it is noticeable that it was seldom attempted in the colonies and even then had little effect. The reason was that where wages were fixed too low the laborer either refused to hire himself out and turned to farming or some craft where he could be independent or else moved away. Furthermore, in the colonies there was much greater mobility of labor than in England where, chiefly in the effort to keep wages down, many restrictions had been placed in the way of workers who desired to change their craft or to move from place to place. The fact that economic conditions in the colonies made it impossible to develop any such system of effective restrictions was an important factor in keeping up the wages and improving the condition of laborers.

More important in its influence was the rather common practice of regulating the prices of many commodities or services that were necessities, also copied from England. In the colonies prices were most frequently fixed in the case of bread, known as the "assize" of bread; it was also customary to regulate the rates charged by mills, ferries, and inns. The reason for this practice was found in the relative absence of effective competition in the small local markets and the resulting substantial monopoly of a necessity which enabled the producer to charge unreasonably high prices unless his charges were regulated, a position in many respects analogous to our present-day public utilities. Such price regulation chiefly affected independent producers rather than hired laborers, but in so far as the former employed others to work for them it tended to limit the wages which they could pay. Even in the case of the independent craftsman, it was almost the same as wage fixing in effect; for outside of the cost of the raw material his labor was the chief element entering into the cost and determining the price of the product. It was against such price fixing that the few so-called strikes of the colonial period took place, such as that of the street cleaners of New York in 1677, the coopers in 1680, or the bakers in 1741. Thus they were not like

the modern strikes, a contest between laborers and employers, but a protest of what were for the most part independent craftsmen against price fixing by the local government.

The Economic Position of the Laborer. Today the labor problem, particularly the relations between the laborer and his employer or what is called capital, is one of the most prominent and difficult of the issues confronting the country. In the colonies this problem as we know it can scarcely be said to have existed; the chief problem then, if such it can be called, consisted in securing an adequate supply of labor. Even then developments were slowly tending to create the conditions out of which the modern problem has evolved, and these developments are worth examining so as to secure a clearer understanding of the background of our modern problem. The absence of any large group of hired laborers in the colonies has been explained as due to the easy access to land, the small amount of capital used, and the relatively slight extent to which division of labor was carried. The absence of the intense competition to which both employer and labor are subject today was also an important factor in the situation. But in all of these respects slow changes were taking place during the colonial period, the growth of competition and increased specialization being the most significant.

Competition between employers seeking labor tends to raise wages; it was this that kept the general level of wages in the colonies high. On the other hand, there are various forms of competition that press upon the laborer and tend to lower his wages or make the conditions of work harder. There is the direct competition from other laborers seeking employment in the same market; there is the competition between similar commodities made by different producers, perhaps in distant places, which, when sold in a common market, create a competition between the producers that in turn reacts upon their hired workers; and there is the competition that tends to decrease the demand for labor, arising either from the introduction of labor-saving devices and substitutes such as machinery or from people diverting their purchases to other commodities made by a different group of laborers. All these forms of competition were to be found in the colonies.

Perhaps the earliest striking illustration of such competition is the complaint that arose among the shoemakers and coopers of Boston in 1648 against the itinerant or unskilled workers who sold their goods or services at lower prices. As a result both complainants were granted charters similar in character to those of the English guilds giving them a practical monopoly of the trade in Boston and the power to stop unskilled workers. Although these groups were independent craftsmen rather than hired laborers, the most significant point is that, except for possible cases in Philadelphia, so far as is known, these two are the only instances of

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such charter grants in the colonies. The guild system was another one of the medieval institutions of Europe that found conditions in the colonies, chief among which was the scarcity of skilled labor, unfavorable to its development.

Through the regulations governing apprenticeship, however, the master craftsmen found some protection against the competition of less skilled workers, for these regulations were often passed quite as much with that object in view as with the object of training skilled workers. But these regulations were not favored by the dominant agricultural class and were difficult to enforce; there was pressure to shorten the period of apprenticeship and often the apprentice, having acquired some training, escaped to some community where no such restrictions were imposed.

Ordinarily the apprentice could look forward to the time when he would be an independent master craftsman. But, as the colonies developed, towns grew in population, and the markets expanded, some of the craftsmen began to enlarge their business and employ not only more apprentices but hired workers or journeymen. As the output of one shop came into competition in the widening market with the output of another shop, whether located in the same town or another colony or a foreign country, the master craftsman was apt to be under some pressure to keep down the wages of his journeymen. Although the journeymen naturally endeavored to prevent this, it does not appear that in the period before the Revolution they had developed sufficient strength through organization to make their opposition effective; however, in the years immediately following, such organizations began to develop. Doubtless one reason was that the pressure upon the journeymen was not great, the competition between the producers not being keen; another reason was that they were few in numbers and most of them remained in the position of journeyman for only a short period before setting up independent shops of their own. Yet an increasing, though still a small number, appear to have remained in this position all their life; and in the growth of such a group we see a step toward the division of labor, tending to separate the worker and the employer and to build up in these skilled trades a distinct and separate laboring class increasingly made conscious of its economic interests and beginning to seek through the power of organization for means to defend them. Out of all these and other later developments the modern labor movement emerged, though not until after the colonial period had ended.

CHAPTER VIII

COLONIAL TRADE AND MARKET ORGANIZATION

The Function of Trade in the Economic Order. The function of trade in the economic order is to further the process of specialization or division of labor in the production of economic goods or services. It is through this process, where each person specializes in the making of those goods or services for which he is best fitted and then exchanges his surplus products for those in the production of which some other person has a relative advantage, that goods are obtained more cheaply than where every person or family produces all the goods that they consume. The economic principle underlying this specialization is generally known as the law of comparative costs, namely, that each individual, assuming an intelligent choice from the point of view of his economic interests, will tend to specialize in that line of activity in which he possesses the greatest relative advantage as compared with those producing the various goods which enter into exchange under the conditions then existing. This applies not only between the individuals who make up the family group, but between individuals within the same locality, the same nation, or throughout the whole world, and so underlies all trade whether local, national, or international. It applies, moreover, to all the agents of production, to natural resources, capital goods, and business management as well as to labor. Such being the case, since there are marked variations in the productive capacity of these various agents not only within a country but throughout the world, it is obvious that the greater the proportion of the supply of these agents of production throughout the world that enters into the process of the world's specialization and exchange, the greater the likelihood that the wants of the world will be supplied in the most economical way; in short that the people of the world as a whole will have their wants supplied more completely and with less economic effort and sacrifice than would otherwise be possible.

The ideal situation, economically, would be one where no limitations or hindrances on trade were found and where there was a world-wide market for all commodities. To attain such a situation it would be necessary that all commodities could be transferred from one place to another without cost and that the total supply and the prices of any commodity should be known to all seeking to buy it; in short that all buyers and all sellers should be able to come together with a complete knowledge of mar-

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ket conditions, and that the various institutions and devices for facilitating all the steps in the process of exchange should be fully developed. It is because such conditions are far from being attained that the market for commodities is so limited and in consequence the exchange of goods is so circumscribed. Moreover, we find that in addition to the limitations of the market arising from this source there are other restrictions which individuals or social groups have consciously placed in the way of the attainment of the freest market, sometimes because of the economic advantage thus attained by a few, sometimes because purposes or wants other than the purely economic were supposed to be furthered thereby. Still, if we look back over the long course of history, we see that the fundamental fact in the evolution of trade has been the slow but sure advance made towards the attainment of this ideal of a world market. Since the beginning of recorded history, this development has been going on, for many centuries advancing very slowly and often retarded or set back as at present, but ever in the same direction.

The advance in science, the introduction of better means of transportation and communication, the development of the unknown resources of backward regions, the growth of new devices and institutions for facilitating trade have all helped to further this objective and thus have enabled the world to support a much larger population and made it possible for that population as a whole to supply its economic wants more completely and with less effort, thus furthering the progress of civilization.

Bearing in mind this function of trade and the various devices and institutions of the market in furthering the process of specialization and division of labor, let us turn to an examination of the conditions existing in the colonies and a study of the progress they made in this field of industrial activity. It should be noted, however, that under the heading of trade we deal primarily with the exchange of commodities, and that the exchange of the services of labor and capital funds (as distinguished from capital goods) are dealt with under separate heads, though such exchange, as already stated, plays a part in the general economic process of specialization and division of labor.

General Conditions Limiting Colonial Trade. As we might expect in a newly developing country of the seventeenth and eighteenth centuries, the outstanding feature affecting the trade of the colonies was the conditions that limited the size of the market. Prominent among these was the heavy cost of overland transportation, a problem made all the more serious by the fact that the most important products of the colonies consisted of goods that were heavy and bulky in proportion to their value, and hence less able economically to stand high transportation charges. It was of course, in part, to avoid this difficulty that the colonists first sought to establish their settlements along the coast and the navigable

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streams. Such sections were not only easier to get to in the first place but, through the cheap and free highways of the sea, they gave access to markets where goods could be disposed of and where others could be purchased that would not otherwise have been available. Thus it cost less to transport a ton of iron across the Atlantic than to carry it 70 miles overland from Lancaster to Philadelphia. Hence it was that, throughout the colonial period, the waterways were the chief means of transportation for commodities that had more than a local market. The settlers were fortunate indeed in having a coast affording so many excellent harbors and navigable streams.

When the number of settlers had increased to the point where they were forced to move inland and away from navigable waterways, the problems of overland transportation became serious. At first the Indian trails and narrow paths were used and goods transported on horseback. But the need for roads was great and as soon as the population of any section had increased to the point where the burden of constructing roads did not fall too heavily upon the community, measures were taken to further their construction. It was therefore in the more thickly settled regions where town settlement prevailed, as in New England or the middle colonies, that roads were generally built. Massachusetts in 1639 required each town to build a highway to connect with the adjoining town and it became the custom for towns to levy a road tax payable in money or to be worked out by the farmer and his team on the roads each year.

Roads were built very slowly and chiefly during the eighteenth century as population spread inland; by the period shortly before the Revolution there was a fair system in the more densely settled regions supplemented by many narrow paths and old Indian trails. In New England roads radiated from Boston to New Hampshire, western Massachusetts, and Rhode Island, there connecting with a road along the shore to New York. Another main road followed up the valley of the Connecticut toward the border of Vermont. In New York the course of the Hudson River furnished the starting point for roads built to the near-by settlements and the Iroquois trail extended westward from Albany to Lake Erie and Lake Ontario. The main highway across New Jersey connected New York and Philadelphia; from the latter city a number of roads extended into the agricultural settlements to the west and south. Forbes Road across the colony to Pittsburgh was opened in 1758. From Baltimore a road ran westward to the Potomac and joined Braddock's Road over the mountains to Pittsburgh, cut in 1754 at the time of the expedition against the French during the French and Indian War. In the tide-water region of the South settlers had at first clung closely to the coast and navigable rivers and no important highways were developed, such roads as existed simply connecting with the nearest waterway. As the

upcountry region was settled, a highway which came to be known as the Wilderness Road was built running up the valley of the Shenandoah and over to the frontier settlement at Watauga; another road from Richmond was extended to connect with it. From this point Boone, following the old Indian path through Cumberland Gap, opened a trail leading to the Lexington region in Kentucky in 1775. Other roads or trails connected the upcountry with seaports or points on the fall line of the rivers where navigation ended. The numerous small streams and rivers presented a constant obstacle to these roads, for bridges over anything but the smaller watercourses were too difficult and expensive to construct. Hence ferries were widely employed, sometimes being set up by the town and sometimes by private initiative, though the rates charged were nearly always subject to regulation by the local authorities.

Even the best of the highroads were far from satisfactory, being seldom kept in proper repair and often, at unfavorable seasons, almost impassable; the ordinary country roads were still worse. Under such conditions, in the sections where snow fell in sufficient quantity, extensive use was made of sledges and it was chiefly in the winter an attempt was made to carry bulky produce to the more distant markets. Elsewhere, as passable roads became available, heavy wagons drawn by slow-moving oxen were used; in the tobacco plantations back from the waterways enormous cylindrical casks were constructed and rolled over the roads drawn by oxen. Those whose chief surplus product consisted of livestock were fortunate in that it could be driven to market. Under such conditions travelers usually found the quickest and most comfortable way to journey was on horseback. On the better roads the light two-wheeled shay could be used and on the main highways, where travel was denser, stage lines were gradually introduced. By 1760 one could journey by stage from Boston to New York in four days and thence to Philadelphia in three days more. The stage that made the latter trip in two days in 1766 was known as the "flying machine." To accommodate this travel frequent inns and taverns were necessary, and as the smaller places seldom afforded more than one tavern, their charges were commonly regulated for the protection of the public. In the South where such accommodation was less available the open door and generous hospitality of the plantations afforded an excellent substitute.

The Means of Communication. The lack of easy means of transportation was in part responsible for another difficulty which seriously hindered trade—the absence of cheap and quick means of communication. How serious a problem this created is difficult of realization nowadays in a generation accustomed to the telegraph, the telephone, the radio, cheap printing, newspapers, low postage rates, and widespread advertising. The absence of such facilities in colonial times meant that those who were

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producing goods for sale had little information about market conditions either present or prospective, and the purchaser of goods was similarly handicapped. Thus the risks of industry and trade were increased and the obstacles in the way of the most efficient distribution of goods made more serious.

Most of the colonies attempted to establish a limited post-office service during the latter portion of the seventeenth century. By 1672 a monthly post route existed between Boston and New York; in 1693 under a crown patent to one Thomas Neale, a service was set up running from New Hampshire to Virginia, weekly in summer and fortnightly in winter. In 1707 this patent was bought back by the crown and the general post-office established. The rates charged in the colonies were about 4*d.* a single sheet for letters carried less than 60 miles, 6*d.* up to 100 miles, with double rates for two-sheet letters. From England to the colonies the rate for a single sheet letter was 1*s.* In 1753 the rates were reduced about one-third. Even at the end of the colonial period the postal service was mainly confined to the more populous seaboard area and the rates remained so high that travelers were generally called upon to transport messages wherever possible.

The first permanent newspaper to be established was the *Boston News Letter*, a weekly publication started in 1704. By 1740 the number of newspapers had risen to 11, including 5 in Massachusetts, 3 in Pennsylvania, and 1 each in New York, Virginia, and South Carolina. By the time of the Revolution there were about 37 newspapers. Typically, they were small sheets and usually issued weekly, for the first daily did not make its appearance until the *Pennsylvania Packet* was established in Philadelphia in 1784. For the most part the news dealt with political events, and questions of trade and market conditions received little attention. A fair amount of advertising was included and these small notices, with possibly some distribution of handbills, seem to have constituted about the only available means of spreading market information.

Under such conditions news and information of any sort spread very slowly and chiefly by word of mouth, handed on from one person to another, rather than by the printed page. Around 1760 it was stated that it took about three weeks for news to spread through the different colonies; the frontier settlers were still slower in learning of the course of events either political or economic. This meant that conditions affecting the markets for commodities were but imperfectly known to buyers and sellers; where or when they could buy or sell on the most favorable terms was a point on which they had scant information; to plan ahead was difficult and involved risks. Still it should be recognized that lack of satisfactory means of communication was not so serious an obstacle to trade, particularly that within the colonies, as would have been the case had

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not various other obstacles also greatly limited the scope of the market for most commodities.

Among the obstacles, in addition to the heavy costs of transportation and communication just described, may be included the lack of satisfactory circulating medium and credit facilities, which complicated and increased the financial risks in exchange; the absence, except for marine insurance, of facilities for insurance to distribute the losses from fire or other causes; and the relatively undeveloped character of various other institutions and methods such as nowadays facilitate the work of the middleman and the process of exchange.

With this background of the general conditions under which the marketing process had to be carried on, we can now turn to a survey of the trade that actually developed, taking up first domestic trade within the colonies and then their foreign trade.

Trade within the Colonies. The outstanding feature of colonial trade was its relatively small amount. This was inevitable under the numerous hampering conditions limiting the extent of the market and preventing specialization and division of labor. It was this situation that compelled most of the population outside of the larger towns to supply the greater portion of their own wants, and so was responsible for the relatively self-sufficing economy. The extent to which different families supplied their own wants varied greatly and depended on the degree of economic isolation. After all, the economic wants supplied by the commodities available in the typical family among the masses were very few in number and covered little more than the bare necessities of food, clothing, shelter, all of the simplest form.

Since most families lived on farms or at least had gardens, they usually were able to supply a portion, generally by far the greater portion, of their own food, except for salt and a few tropical products, which at best were luxuries. In frontier sections shelter was provided by the log cabin made from timber out of the wood lot, also the source of many other house furnishings; if a frame house was to be built, there was required from outside little more than the services of a lumber mill, perhaps a carpenter, and the aid of a few neighbors in raising the frame. For textiles and clothing the patch of flax, the flock of sheep, or perhaps the wild deer commonly supplied the raw material, and the final product was prepared within the household. Thus the pioneer, going to the back-country frontier to settle, first provided himself with a few things that he could not readily procure in the wilderness and depended little upon trade, once his home had been established. The things he was most likely to have to obtain in this way were metal products, salt, paper, cotton, medicines, ammunition, and a few tropical products. We may surmise that such a family generally obtained, by way of trade in the course of an average year,

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goods the total value of which seldom exceeded \$25 or \$50 and often was nearer \$10.

The trading of those living in the small rural villages was more extensive. It was likely to include, in addition to those things already enumerated, the services or products of the local lumber mill, the grist mill, the carpenter, the blacksmith, the doctor, and the clergyman, if these were available. In the case of those living in the larger towns and seaports there was far more division of labor. Even there most people had at least a garden and often a cow which supplied a portion of the food; except for the wealthy, much of the clothing was made at home, not to mention many other products of the household industries. Still, in such places most individuals had some one line of economic activity which they followed as a trade or profession; and they depended on the proceeds from the sale of their services or products to secure such things as the household activities did not supply.

Under these conditions the commodities entering into general trade between different sections of any one colony were very limited. In the New England colonies the relatively small amount of surplus farm products, together with lumber, furs, or fish from the extractive industries and the varied commodities of the household industries, the mills, and the forges, constituted the surplus products that were exchanged for one another or for imported commodities. In the middle colonies the list was about the same except that the surplus agricultural products, especially grain, as well as skins of the fur trade, bulked much larger in amount; fish and lumber products were less important. In the South the tidewater region specialized in the great staples of the plantation, tobacco, rice, indigo, and some livestock and forest products. Little else was produced for trade till after about 1730 when settlers began to move into the back country and started to send grain, skins, and livestock to the markets along the coast.

The least developed and least important branch of colonial trade was that between the different colonies. Where the population was fairly numerous and located in immediately adjoining sections of two colonies such as New York, New Jersey, and Connecticut, the amount of such trade was considerable, but much of it was purely local in character, or arose, as in North Carolina, because the best ports for export were in neighboring colonies. The chief products of the different colonies were for the most part so much alike that there was little to be gained by exchange. Such intercolonial trade as did develop was chiefly concerned with the redistribution of goods from foreign countries, the distribution of southern staples, rum, and small amounts of household manufactures. After about 1750 the intercolonial trade in foodstuffs attained somewhat greater importance. In addition there was the trade with the Indians which brought

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in furs in exchange for rum, blankets, guns, and trinkets. The traffic between colonies was carried on by small vessels sailing along the coast or by vessels in the foreign trade stopping at the different ports as they proceeded on longer trips. Besides the common difficulties affecting trade in general, the intercolonial trade was further limited by various provincial regulations, particularly the customs duties imposed. Such duties were often imposed to prevent imports from a neighboring colony and were a frequent cause of ill feeling and retaliatory action. In a similar way the tonnage duties levied were sometimes designed to injure the shipping of another colony.

The Marketing Organization. The marketing organization and methods that were developed for carrying on this trade during the colonial period were naturally very simple and crude as compared with those of today. In the country districts about the only individual who could be said to have specialized in trade, except for the Indian trader of the frontier, was the keeper of the country store and even he was apt to be a farmer as well. He was less common in the South than in the North. He kept a supply of such goods as were not produced in the locality and it was usually to him that the farmer brought in small supplies of his surplus farm products or household manufactures, though if the quantity were large the farmer might himself carry them to the distant markets on the seaboard. The storekeeper would ordinarily obtain his stock of goods by making a journey once or twice a year to the larger markets in the cities; on these occasions he would carry with him some of the goods he had obtained in trade. It was either in this way or through the farmer's bringing in the produce himself that there were gathered together in the seaport cities such products as the cities needed for their own consumption and those that made up the bulk of their exports to other regions. Occasionally we find mention of the itinerant peddler traveling about through the more populous rural districts and furnishing some competition with the country store, though it was not until a later period that this became common. The itinerant craftsman also helped to supply the wants of the country people.

In the large villages and towns there was more chance for specializing in different lines of trade; in such localities a number of stores might be found each dealing in one or two general lines of goods. In the case of craftsmen we find that, in addition to producing goods made to order, some began to accumulate a surplus stock to be sold to passing strangers or country storekeepers from the more remote districts or to be sent to the larger city markets. Such for example was the development in the boot and shoe industry in Massachusetts. In these cases the homestead usually served as shop and also the store where the goods were sold. In the largest towns and seaport cities we find, in addition to a great many shops of this

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sort, regular markets where nothing but trade was carried on, those for the sale of foodstuffs being the most frequent. In some places such markets were open every day and in others they were not continuous but open only certain days in the week. Another feature of many such localities was the fairs held once or twice a year. Here a great variety of goods was offered for sale and people came in large numbers, often from a considerable distance; here, too, the farmer found another market for some of the products of the household industries and an opportunity to purchase a stock of supplies for the coming year. It was only in the commercial seaports where the volume of trade was largest that the wholesale trade developed to any appreciable extent. Here were located the great merchants who gathered together the products of the colonies destined for export and through whose activities the imports from other lands were brought in and distributed. It was this foreign trade, under which we include that with the British Empire as well as with foreign countries, that was carried on on the largest scale and in it the market organization reached its highest stage of development.

Foreign Trade of the Colonies—Underlying Economic Conditions. The importance of foreign trade in the history of the colonies can hardly be exaggerated; this is true of the political history as well as of the economic development. This is due to two things. (1) The colonies were looked upon as valuable to Great Britain chiefly because of their trade and, up to at least 1764, the relations between them and the mother country were largely determined by considerations connected with trade. Trading companies had played an important part in the original settlements and the regulation of trade was one of the primary considerations governing British control of the colonies. (2) Foreign commerce played a particularly important part in the general trade of the colonies and in the development of their economic life. In fact this importance continued down to the War of 1812. Its declining relative importance as compared with domestic trade was one of the striking features in the economic history of the country during the nineteenth century; only in the twentieth century has it shown signs of growing significance. It might be argued that at no time in the history of the country did foreign trade play so important a part in the economic life of the people as during the colonial period and the years immediately succeeding it down to 1812.

In order to understand the character of the commodities entering into this foreign trade, the routes that it followed, and the causes underlying its development, we must first turn to an analysis of the underlying factors in the situation. These may be divided into two groups: (1) the economic conditions determining the relative costs in the colonies and other countries of the goods entering into trade, together with the facilities for transportation and other factors contributory to the marketing

process; (2) the legislative enactments on the part of the different colonies, Great Britain, or foreign countries which regulated, either by repressing or stimulating, the economically natural or free course of trade. The first of these groups was by far the more important of the two as has always been true in the case of the great bulk of international trade throughout the world." It is chiefly because of the political issues aroused and the great amount of discussion and popular attention attracted to the topic that the public mind has come to attach far greater importance to the power of legislation to control the course of trade than it in fact has possessed, while the significance and power of the more fundamental underlying economic conditions have been sadly ignored. Though economic history affords many lessons on this point its truth has still to be learned by most people.

To understand the conditions underlying the first group it must be borne in mind that, since they involve a comparison of the relative costs of goods in other countries as well as in the colonies, some knowledge of the general economic situation in those other countries is necessary.

The lines of economic activity in which the colonies had a marked advantage have already been noted in our study of the extractive industries and manufacturing. It was there pointed out that, in the absence of an abundant supply of labor and capital and through the possession of rich natural resources, the situation was such that the colonists found themselves best fitted economically to give most of their attention to producing the raw materials which were supplied by the available natural resources. On the other hand the countries with which the colonies traded had an advantage as compared with the colonies in two general lines: (1) in a more abundant supply of labor and capital; (2) in certain kinds of natural resources, mainly those of a tropical region. The first of these lines of advantage was possessed chiefly by European countries and in the most marked degree by England, France, and the Low Countries. There population was relatively dense and a large body of skilled laborers had been developed in the household, or domestic, industries. Furthermore, many centuries of development had enabled Europe to accumulate a considerable quantity of wealth so that capital was relatively abundant. It was thus in manufactured goods, in the production of which labor and capital play a relatively important part, that Europe found her chief comparative advantage over the colonies. The second general line of advantage of course fell to tropical countries; here the West Indies played a notable part, so important in fact that it is essential to have a clear understanding of the conditions in those islands during the colonial period, the more so as the general situation has so altered since then that it is difficult to appreciate how vital a factor these islands were in the economic life of the colonies on the mainland.

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The West Indies first entered upon a period of rapid development during the seventeenth century and the various European countries possessing them sought to secure from this source such tropical products as they needed and the islands could supply. Among these products sugar soon became preeminent. Europe produced very little cane sugar; beet sugar, it must be remembered, was not introduced there until the nineteenth century so that during the colonial period the West Indies became the main sources of supply for western Europe. It was chiefly on the sugar industry that the rapid growth in prosperity of these islands was based and it was this that caused the nations of western Europe to regard them as such valuable possessions. Among the British possessions the Barbados were the first to raise this product; but they reached the height of their prosperity by the end of the seventeenth century and after that Jamaica, though slowly developed, became important. Among the French possessions the little islands of Martinique and Guadeloupe first took the lead; during the eighteenth century Santo Domingo grew with great rapidity and became the chief sugar-producing colony of the West Indies, its output alone being reported by 1776 as exceeding that of all the British West Indies. On the other hand the rich Spanish possessions of Puerto Rico and Cuba, suffering from general neglect and the strict commercial control that Spain imposed, did not begin to develop their great natural resources until the last third of the eighteenth century.

In addition to sugar and molasses, such items as tobacco, cocoa, dyestuffs, coffee, and cotton were among the exports from these islands. It was to the production of such commodities that the West Indies directed all their efforts and they were in consequence largely dependent on outside sources for many supplies, chief among which were manufactured goods, foodstuffs, lumber, draft animals, and slaves. Africa was the source of the slaves; the manufactures were obtained in the main from Europe, as was also a portion of the foodstuffs; and the colonies furnished the remainder together with lumber products and draft animals. It was the rapidly expanding demand for these commodities in the West Indies that furnished one of the chief markets for the surplus products of the extractive industries in the Northern colonies and thereby played a most important part in their development.

The Slave Trade. Another factor of importance as a part of the background necessary for an understanding of colonial commerce is the African slave trade. This was significant for its influence upon the economic development of many of the colonies in the New World, for its reaction upon their trade, and, in consequence, for the effects it had upon the commercial policies of the nations of western Europe.

This trade, commencing in the second half of the fifteenth century, was based upon the supply of slaves obtainable on the west coast of

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Africa in the region extending from Cape Verde to beyond the Congo, all of which was then under the control of Portugal. The European market for these slaves was slight but the discovery of the New World and the need for labor to exploit its various resources as they began to be made known created a demand that steadily rose until the adoption of measures to abolish the trade early in the nineteenth century.

During most of the sixteenth century the Portuguese were able to dominate the slave trade; since Brazil was their only American colony where slaves were in demand, they allowed foreigners to take some part in the trade to the Spanish colonies which provided the only other market until a demand arose in the course of the seventeenth century as a result of the growth of colonies established by other nations. During the period of her control over Portugal, 1581-1640, Spain was able to provide for the demand for slaves in her colonies from Portugal's African possessions; when she lost these and had no source of supply of her own, she was forced to fall back upon the slaves brought by foreign traders. From that time until the extermination of the trade, the slavers of all nations were engaged in a keen rivalry to supply the great market existing in the Spanish-American possessions, and the issue became an important factor in international diplomatic and commercial relations. To obtain a revenue from this trade as well as to control it, Spain eventually adopted an arrangement known as the "assiento" whereby she sold a contract to supply the slave markets of her colonies. This contract was held by the traders of different nations in turn until it was given to England under the Treaty of Utrecht in 1713 and Parliament then turned it over to the famous South Sea Company. The holders of the assiento, however, frequently failed to supply the number of slaves desired and there was always a large illicit trade despite all efforts to check it.

In the seventeenth century the growth of colonial possessions largely seized from Spain by England, France, and Holland and their need for slave labor as the cultivation of sugar, tobacco, and other products rose provided an additional reason why these nations should try to obtain a stronger hold in the slave trade by acquiring posts in the Portuguese possessions along the African coast, and an intense rivalry marked by much violence resulted. In this move the French and the Dutch were somewhat ahead of the English, whose aggressive development of the trade started only about 1660 but then made rapid progress. It was the general practice of each nation to grant a monopoly of its trade to a company which was expected to protect and maintain the African posts, but company management seldom proved efficient in the long run and interlopers greatly reduced company profits. In 1698 England ended the monopoly feature of the grant she had made to the Royal African Company and from then on the English trade rapidly passed into the hands

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of individuals, an increasing number of whom were located outside of London in either Bristol or Liverpool. In this trade the British colonists both on the mainland and in the West Indies sought a share and shortly before the Revolution probably had 60 or 70 vessels employed in it. In the eighteenth century under this greater freedom the English soon acquired first place in the slave trade; the Dutch fell to second and then to third place below the French, and the Portuguese were sometimes forced to meet a portion of the Brazilian demand by purchases from others.

Though no satisfactory figures as to the volume of the trade are available it is clear that its growth, from about the middle of the seventeenth to the close of the eighteenth century, was rapid. As early as 1540 it was stated that 10,000 slaves were being carried out of Africa yearly; from 1735 on to 1800 the number probably fluctuated between 30,000 and 80,000 a year. Phillips states that, "The total transportation from first to last may well have numbered more than five million souls," this being far more than the number of whites who came over before 1800, but that less than a tenth of this total came to the North American continent.¹ The importation of slaves into the British colonies on the mainland in the period between 1735 and 1775 probably averaged between 3,000 and 4,000 a year. The circumstances surrounding its growth certainly indicate that the trade was generally very profitable. About 1680 slaves costing around £3 in Africa were sold in the West Indies for £13 to £16, though the losses by death in the horror of the middle passage were apt to be heavy. By the latter part of the eighteenth century, although the cost had risen, the demand was such that they were selling in the West Indies at around £15 to £26 in 1766, and £45 in 1790.

From the nationalistic point of view the slave trade was valued not only for the profit that came from dealing in slaves but also as an outlet for the manufactured goods given in exchange for slaves, as ensuring a supply of labor needed for the development of the colonies, as providing employment for shipping and sailors, and in the case of the Spanish colonies as providing a cover for illicit trade in goods.

Among the economic conditions governing foreign trade, in addition to the factors determining the comparative costs in the different countries just described, were the conditions affecting costs of transportation and the various facilities entering into the market organization, to which we now turn.

The Risks Attending Foreign Commerce. Thanks to the easy access to foreign markets provided by the highways of the sea a cheap method of transportation was available. Further, the extensive shipbuilding industry of the colonies provided a ready means of carriage. The ships

¹ PHILLIPS, U. B., "American Negro Slavery," p. 39, New York, 1918.

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that the colonies used in the transatlantic trade before the Revolution averaged about 160 tons; those used in the West Indies trade were much smaller, usually 40 to 70 tons. But the risks attending ocean transportation were great. In the first place there were the dangers of navigation at a time when the coasts were none too well charted, the lighthouse service poor, the ships small and entirely dependent on sail, and the facilities for forecasting and quickly transmitting news as to weather conditions entirely lacking. In addition there were the risks arising from frequent wars during which privateers were active and, finally, there was the danger of capture by the numerous pirates. The latter during the seventeenth century frequented many inlets along the coast from Rhode Island to South Carolina and often found abundant opportunity to trade or enjoy their gains in colonial seaports. The traffic of the West Indies yielded them many a rich prize.

During the last quarter of the seventeenth century both England and France started a move to curb their depredations in the Caribbean region. Parliament in 1698 passed a severe law against piracy and, after the end of the War of the Spanish Succession in 1713, the British navy, together with the colonies under the leadership of Virginia and Massachusetts, took forceful measures to clear them from the coast and effectively restrict their activities on the high seas. The famous Blackbeard or Thatch, who is said to have had the governor of a province as his partner, was killed in 1718. However, the pirates of the Barbary Coast of northern Africa preying upon the traffic about the Mediterranean were not exterminated till nearly a century later.

In view of these great risks and the fact that the loss of a ship and cargo would have fallen with a crushing weight upon the owners, it is natural that some means should have been sought to meet the difficulty for, otherwise, only the most venturesome would have been prepared to face the possibility of financial ruin which such a loss sometimes involved, and in consequence commerce would have been seriously restricted. The means adopted was insurance, for the chief function of insurance is to distribute the losses attendant on risks so that only a small amount is borne by any one individual. It was because of the unusually heavy risks attendant upon foreign commerce that the first form of insurance to develop was marine insurance; for the same reason it was the first, and practically the only, kind of insurance that appeared in the colonies. What seems to have been the only fire-insurance company of colonial times was the Philadelphia Contributionship for the Insurance of Homes by Loss from Fire, established in 1752; life-insurance companies did not exist at all, though marine insurance was started at least as early as 1724. This insurance instead of being provided by companies was usually supplied by an individual or broker who went around to a number of

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people and got each to underwrite, or agree to be responsible for, a certain sum—perhaps £50 or £100—in case of loss. A separate insurance or underwriting was secured for each voyage and the rates varied with the distance, season, and different dangers, but for an ordinary voyage from the colonies to the West Indies or from the West Indies to Great Britain they ranged between 2 and 3 per cent. A similar method of insurance had developed still earlier in England, centering in the famous Lloyd's Coffee House which began about 1688. Through this system of distributing the heavy risks involved commerce was greatly aided.

Another type of risk confronting the colonial merchant arose from the lack of quick means of communication with foreign markets. For a merchant to send a letter to Europe or the West Indies and get a reply involved from three to six months or even longer, and in the meantime the market conditions affecting the goods he wanted to buy or sell in those markets might have entirely changed. The New England exporter might find on arrival at a West Indian port that another cargo of a similar type had arrived just before him and glutted the market so that he would have to sail on to another port, or perhaps to several others, in hope of better luck. This meant that the trader might suffer heavy losses on one voyage and reap great profits on another and it also hindered the most economical distribution of goods among the different markets.

The Organization of Foreign Commerce. The organization for carrying on foreign trade was comparatively simple and involved no such extensive specialization of functions as we find today. The merchant traders who carried on the foreign commerce gathered together their supplies in the ports and shipped them out, commonly in sailing vessels that they themselves owned or in which they had a partnership interest. Nothing corresponding to the great modern shipping lines with regular sailings over fixed routes existed, and ships were a part of the equipment of those merchants most extensively engaged in foreign trade. It was because of the heavy investment required for ships as well as for goods in trade that the largest capitalistic enterprises of the period were those engaged in foreign commerce. For the same reason the ownership of sailing vessels was often divided into parts or shares, sometimes as small as one-sixty-fourth. Often the captain had a share in the ownership of the vessel and not infrequently in a portion of the cargo, thus giving him an added interest in the success of the voyage. The goods shipped were under the charge of a person called the supercargo whose duty was to dispose of them in foreign ports, when not shipped on previous orders, and also to make such purchases of goods for the return trip as the owner had directed. In the absence of a supercargo the captain might perform this function, in which case he had to be proficient at trade as well as in navigation.

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In the New England colonies and for the most part in the middle colonies this trade was carried on by merchants living in the colonies and employing colonial ships, though English or West Indian merchants often had an interest in it. In the Southern colonies, on the other hand, though to a less extent in South Carolina, it fell very largely into the hands of British merchants using British ships. These merchants generally had their agents or "factors," as they were called, located in the colonies and looking after their interests. Often the large planter dealt direct with a London agent to whom he consigned his produce and from whom he ordered an endless variety of foreign goods. Frequently he became heavily in debt for such purchasing and he was constantly complaining that the various heavy charges made by the agents tended to absorb most of the proceeds from the sale of his products. In the tobacco colonies, the local agents were apt to be Englishmen or Scotchmen; the result was that in those colonies the attitude of the commercial interests was much more dominated by the British point of view than elsewhere.

The ships engaged in this trade might be gone for many months, sailing from one port to another to dispose of their cargo and pick up a return cargo which, on arriving at the home port, was then distributed by a merchant trader. When all conditions turned out favorably, the profits of the voyage were very high, but many a time they were swallowed up by losses arising from the numerous risks then attending such ventures. Still it was the successful merchant traders who owned the greater portion of the large fortunes that were accumulated in the Northern colonies.

Having outlined the more important of the economic conditions that shaped the character, the course, and the organization of colonial foreign trade, we now turn to the second group of influences reacting upon it—the various laws designed to regulate it. These included the laws passed by the different colonies, by Great Britain, and by foreign countries, and they will be taken up in the order named.

The Colonial Regulation of Commerce. The regulations imposed by the different colonies generally took the form of import or export duties on commodities, or tonnage duties on shipping. Although the primary consideration shaping such legislation was the desire to raise revenue so that duties were essentially a part of the fiscal system of the colonies and might be described under that head, still, they were so largely determined by the conditions shaping foreign trade and so often included regulative purposes that they may equally well be dealt with at this point.

All the colonies imposed import duties for a longer or shorter period of time, but the most developed systems appeared in Massachusetts, New York, and South Carolina. The other New England colonies, obtaining more revenue from other taxes, leaned toward freedom of trade. New

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Jersey and Delaware, being less extensively engaged in commerce, paid little attention to customs duties and Pennsylvania had a relatively simple system. Maryland and Virginia depended more upon export duties. With the exception of the duties on wines and liquors, and in some cases slaves, the rates were moderate, 5 per cent being common on goods not specifically enumerated. The more important commodities specifically listed as dutiable included, in addition to wines, liquors, and slaves, sugar, cocoa, molasses, dye woods, and tea. During the eighteenth century general provisions were made for drawbacks—a return of most of the duty in case the goods were re-exported—this being designed to aid the merchants in the carrying trade.

Export duties were also imposed at one time or another in most of the colonies, though never so important as the import duties and seldom found in the New England or middle colonies, New York excepted, after about 1750. It was only in the tobacco-growing colonies of Maryland and Virginia that they attained real importance and there they became one of the main sources of revenue. The commodities most commonly subject to such duties were tobacco, skins, furs, and lumber, that is goods in the production of which the colonies had such a great advantage that the imposition of an export duty was less likely to lessen their sale in foreign markets.

Although the primary purpose of both export and import duties was to secure revenue rather than to control trade, there were numerous instances of duties where control for one purpose or another was the chief objective. Protection of home industries was aimed at in some of the export duties on such raw materials as grain, timber, skins, and furs, in the expectation that they would then be worked up in the colonies before being exported. At times, especially during wars, a scarcity of goods in the colonies led to export duties to check the outflow, as in the case of iron and wool in Virginia during the seventeenth century. Import duties sometimes had a sumptuary or moral purpose, as where the duty on rum was raised to decrease its consumption or the duty on slaves was raised to check their influx. There were also cases where the colonies got into disputes with one another over boundaries or some other cause and in retaliation, or to force concessions, imposed higher duties on one another's products.

Besides the duties which restricted trade there were efforts to stimulate exports by the giving of bounties. These were chiefly used in the Southern colonies and were given on such commodities as hemp, flax, tar, indigo, cotton, ginger, saltpeter, potash, and pearlash. Those on indigo, hemp, and tar were the most important; even where there was a British bounty in addition, they generally failed to accomplish much except in the case of the bounty on indigo.

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Another method of regulation is found in the inspection laws which existed in practically all the colonies. These were designed to prevent the sale of inferior grades of products and so protect traders in their purchases and maintain the reputation of colonial goods in foreign markets. The protection to consumers thus afforded appears to have been a minor factor among the objectives of such legislation. Massachusetts started such enactments as early as 1641 and New York in 1665 and the laws became more numerous and more detailed up to the time of the Revolution. Lumber, beef, and pork were inspected nearly everywhere, fish in New England and New York, flour and bread in the middle colonies and later in the South. Tobacco received the most detailed regulation and inspection, involving even the size of the cask in which it was shipped and the quality of the timber out of which the cask was made. Naval stores, butter, flax, hemp, horses, indigo, and rice were also on occasion subject to inspection. Although these laws did not altogether eliminate adulteration of goods, they did perform a useful function in securing some standardization of products, thus lessening the risks in the purchase and sale of goods and promoting trade.

In addition to the duties and regulations applicable to commodities entering into foreign trade mention should be made of the colonial regulation of shipping that took the form of tonnage duties. Such duties, levied according to tonnage on ships entering the ports, were found in nearly every colony and were among the earliest to be imposed. Their primary purpose was to secure revenue, chiefly for colonial defense, though later the receipts were also applied to maintaining a lighthouse service. The earliest acts often required payment in powder, that then being scarce in the colonies, and the duty became known as "powder money." At times, lower duties were imposed on vessels owned in the colony than on other vessels, thus discriminating against the latter. The purpose was to aid the shipbuilding and carrying trade of the colony or to retaliate against another colony because of some dispute. Occasionally the laws discriminated against British vessels as well, but such acts were usually disallowed by the British authorities.

From the foregoing summary it will be seen that the colonial regulations affecting trade were generally governed primarily by the fiscal needs of the colonies and by the desire to secure revenue rather than by the desire to regulate or direct the course of foreign trade. As was to be expected, they did not in consequence play an important part in determining that trade. Just the opposite situation, however, existed in the case of the enactments of Great Britain and foreign countries as far as they applied to colonial trade. Regulation and control of trade were the chief objects sought by those countries, though revenue was also stressed,

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and their laws, as far as any laws were effective, played the dominant part in the control of colonial commerce.

British and Foreign Commercial Regulations. The general character of the commercial regulations of such countries as Great Britain, France, and Spain was shaped by the ideals of the Mercantilist System which have already been described. That system, as has been pointed out, strove to build up the power of the nation by controlling economic activities; in attaining this objective particular emphasis was placed on the accumulation of specie, a favorable balance of trade, a large merchant marine, and economic self-sufficiency of the nation or empire. The various ways by which the possession of colonies might be made to contribute towards these ends have previously been pointed out. Largely through the economic advantages derived from control of colonial trade, the European nations calculated on recouping themselves for the heavy expenditures involved in establishing and protecting their colonies.

One other commercial policy of Europe played some part in the regulation of colonial commerce. This was the practice of vesting in the hands of large trading companies the development and control of the trade within certain areas, often including a complete monopoly of that trade. It was by companies of this type that the settlements in Massachusetts and Virginia were promoted as well as the Dutch settlement in New York and that of the Swedes on the Delaware. With the failure of these companies and the expulsion of the Dutch such monopolies disappeared from the colonies, a fact that was not without its importance in the later growth of colonial commerce. Elsewhere, however, many of these companies still existed and their economic interests and influences at times reacted upon the colonies. Thus the Royal African Company had for many years a monopoly of the slave trade in the British regions in Africa and, even after that trade was open to outsiders in 1698, its interests opposed colonial attempts to restrict the importation of slaves. Similarly the great East India Company's interests were reflected in some of the British regulations of trade, notably the controversy over the tea tax just before the Revolution. Monopolies of a like type existed in other countries and helped to restrict the opportunities for trade that were open to the colonies both in the home country and in its foreign possessions.

Quite aside from the restrictions involved in the company monopolies, the policy of careful regulation of trade in England dates back to a period long before the colonies were founded. As early as the reign of Richard II, England had begun to impose regulations on foreign trade, but the rapid expansion of the system came with the great growth of overseas trade and the rise of the great trading companies during the latter sixteenth and the seventeenth centuries, a period when the rivalry of European

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nations in their efforts to secure this trade was becoming most intense. The first important restriction imposed on the colonies came in 1621 when the Privy Council required Virginia to send all her exports of tobacco to England; in 1624 there was added the proviso that they must be sent in English ships. Subsequent legislation provided further regulations and excluded foreigners from trading in the colony. The first of the series commonly known as the Navigation Acts was passed under Cromwell in 1650, followed by a more comprehensive law in 1651. This, like those that followed, was immediately directed against the Dutch, who were then supreme in the carrying trade of the world. In the trade with the countries bordering on the Baltic Sea, in the North Sea fisheries, in the spice trade of the Far East, and in the slave trade with Africa it was the Dutch who dominated; the French statesman, Colbert, estimated about this time that of the 20,000 vessels in the merchant marine of the world 16,000 belonged to the Dutch. The commercial success of little Holland aroused the jealousy as well as the admiration of both England and France and both countries undertook by wars and commercial regulations to undermine it.

The Navigation Act of 1651 provided that no products of Asia, Africa, or America could be imported into England, or English possessions, except in vessels owned in England or the colonies and of which the master and most of the crew were English subjects; the products of European countries could be imported only in such vessels or in those of the country in which they were produced or from which they were usually of necessity first shipped. In addition, products of the whale, cod, and herring fisheries could be imported only if caught and brought in English ships, and foreign ships were excluded from the coastwise trade. Certain exceptions allowed greater freedom in the Mediterranean and Levantine sea trade. Such regulations were a direct blow at Holland, for that country produced relatively few commodities except woolens herself and was engaged chiefly in carrying the goods of other countries. In 1652 war with Holland broke out but after peace was reestablished in 1654 the provisions of this act do not appear to have been generally enforced in the colonies.

After the Restoration a series of acts continued this policy with even more stringent regulations. Under the Navigation Act of 1660 no goods could be imported into or exported from English possessions in Asia, Africa, and America except in vessels owned and, under an act of 1662, with minor exceptions, built, by English subjects; nor could the products of Asia, Africa, or America be imported into England, Ireland, or Wales in any but such vessels; nor could the products of any other region (for example, Europe) be imported in any but such vessels or those of the country where they were produced or of necessity first shipped. Another

clause of this act enumerated certain commodities of the English plantations in Asia, Africa, or America that could be shipped from the plantations only to other English colonies or to England, Ireland, or Wales, a bond to this effect being required before shipment. The so-called enumerated commodities included in this act were sugar, tobacco, cotton, indigo, ginger, fustic, and other dye woods. The provisions of this law were designed to afford additional protection to English shipping, to secure for the English textile industries certain needed raw materials, to give England control of the tobacco and sugar output of the colonies, and to augment the English revenue by such duties as were paid on those products and not refunded when they were re-exported to the Continent.

A further restriction was imposed under the Act of 1663 requiring that all products of European countries imported into English possessions in Asia, Africa, or America must first be brought to England or Wales, and thence reshipped in English vessels directly to the colonies. Exceptions permitted salt to be shipped from Europe for the New England, Newfoundland, and later certain other fisheries, wines from the Madeiras and Azores, and servants, horses, and food supplies from Scotland and Ireland. This Staple Act gave to English merchants the handling of the trade in European products shipped to the colonies and the government received the revenue derived from any duties paid on importation into England that was not refunded as a drawback on reexportation.

In 1673 another act provided, in the case of the various enumerated commodities and cacao, where a bond was not given at the time of their export from one colony to another, that they would be landed in England, certain plantation duties should be imposed, the duty on tobacco being one penny a pound, payable to royal customs officials to be appointed in the colonies. The reason for this act was that, where the enumerated commodities had been shipped from one English colony to another, they had not paid a duty, or only a local levy, though they were liable to a duty when shipped to England. Thus the colonists were able to obtain the goods at lower prices than the people of England. The practice also offered additional incentive to evade the law and reship the commodities direct to the Continent to escape the English duties.

In 1696 another act somewhat strengthened the provisions for the enforcement of these regulations. It specified that the payment of these duties did not allow enumerated commodities to be reshipped except to England or her possessions; it allowed cases to be brought up in the Admiralty courts where jury trial did not exist, instead of in the common law courts where great difficulty had been experienced in securing convictions; and the appointment of various officials enforcing the regulations in the colonies was transferred to England. In the eighteenth century the list of enumerated commodities was expanded: East Indian goods were

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included in 1698; various shipbuilding materials, molasses, and rice were added in 1705-1706; copper ore, beaver skins, and other furs in 1721; whale fins, hides, skins, iron, lumber, raw silk, potash, pearlash, coffee, cacao, and pimento in 1764. Subsequent modifications permitted the shipment of rice to Europe south of Cape Finisterre after 1730 and the shipment of sugar direct to the Continent after 1739. In 1764 South Carolina and Georgia were allowed to ship rice to American points to the southward. Until 1766, after which they could not be shipped to countries on the Continent north of Cape Finisterre, the colonies could ship non-enumerated commodities anywhere, though of course they were subject to such duties or restrictions as England or any other country to which they were sent might impose. Throughout the colonial period the freedom of access to the markets of the British West Indies was of great advantage to the colonies.

In addition to the Navigation Acts England passed several laws designed to check the growth of certain colonial manufactures previously noted; these acts included restrictions on exports. Among these the Act of 1699 prohibited the export from the colonies of wool or manufactures of wool; the act of 1732 prohibited the exportation of beaver hats. Both laws were designed to protect English manufacturers, and, although the former was not oppressive since wool was never abundant, the latter restricted a small but prosperous industry.

A law which, if effectively enforced, would have involved more serious consequences for the colonies was the Molasses Act of 1733 levying duties on the colonial importation of rum, sugar, and molasses from the foreign West Indies that were virtually prohibitive in amount. This act was primarily designed to aid the sugar planters of the British West Indies who had attained considerable influence in Parliament. By this time the competition of the sugar plantations in the French West Indies had become serious. Until near the end of the seventeenth century the Continental demand for sugar had been largely supplied by the English plantations, but after about 1685 the competition of the French and Dutch in the Continental markets rapidly increased and the period between 1720 and 1739 brought great distress to the English planters. The price of molasses and sugar in the French possessions was considerably lower than in the English colonies, partly because the sale of their molasses for the manufacture of rum in France was checked to protect the French brandies and partly because of the export duties imposed in some of the British sugar islands. In consequence the traders from the North American colonies sought to secure their molasses, sugar, and rum from the French planters. This decreased the demand for the English planters' output and led to an outflow of specie from the British islands since the colonial traders endeavored to sell their provisions, lumber, and slaves to the

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British planters for specie and then spent it in the French or Dutch possessions.

Although the British planters hoped through the Molasses Act to force their molasses on the colonists to the north, they also sought relief from the enumeration clause of the Navigation Acts so they could send their sugar direct to the Continent where the Dutch and French had made such gains. It was estimated that the enumeration of sugar compelling them to send their products to the Continent by way of England made it cost 20 per cent more than the French sugar on the Continent. As a result of much agitation and the continued depression, an act was passed in 1739 allowing them to send their sugar direct to the Continent in English vessels; in 1742 this was extended to include colonial vessels as well. By this time, however, the growing demand in England combined with the relatively slow increase in the output of the British colonies had raised the price of sugar to such a point that little use was made of this concession.

Finally, colonial trade with England was regulated by the customs duties imposed by England. These duties were designed partly to obtain revenue and partly to give protection to various English industrial and agricultural products. The rates imposed for the sake of revenue were, generally speaking, moderate and did not appreciably check imports and the protective duties were high and often prohibitive. Since the products of the middle and Northern colonies were typically commodities also produced and therefore usually protected in England, those colonies found that their chief staples, notably foodstuffs, were practically excluded from England and they had to find a market for their surplus elsewhere. Fortunately for them these staples were just what were wanted in the growing markets of the West Indies.

Thus far we have described the most important British laws that reacted on colonial trade by restricting it. Because of the discontent aroused, chiefly by the legislation passed after 1763 which will be described later, these restrictive laws have loomed large in history and Americans in particular have been apt to overlook the facts that often the restrictions were not enforced and that in many ways the trade of the colonies was stimulated by the grant of special privileges and immunities. The colonial system was by no means so one-sided as many have been accustomed to assume.

In the first place, with but a few important exceptions, England followed the policy of including colonial-built and -owned ships within the protective provisions of the Navigation Acts and in spite of protests by English shipbuilders. This in itself was of great advantage, though chiefly to the Northern colonies. In the second place, England, while generally imposing the same duties on imports from the colonies as on

those from foreign countries, admitted a number of the staple products of the colonies at lower rates of duty than were charged on the same products imported from elsewhere and in some cases admitted them duty free; in this way, the colonies were given a distinct advantage in the English market. Thus the English duty on foreign tobacco was so high as to be practically prohibitive while that on colonial tobacco was much lower (though important as a source of revenue); in addition the growing of tobacco in England was prohibited. This gave the colonial product a practical monopoly of the English market. Colonial sugar and molasses received a similar preferential treatment, as did tar and pig iron after 1750, and at various times several other products such as whale fins, train oil, indigo, raw silk, potash, and pearlash, which England needed and did not herself produce.

Furthermore, in the case of commodities imported into England from English colonies or foreign countries and then re-exported to the American colonies, it was the general custom to return most of the duty levied on importation when the goods were sent out to the colonies with the result that the people in England often had to pay a higher duty than did the colonists. This was the case for example with linens, coffee, and tea shortly before the Revolution, though it did not lessen the colonists' objection to the tax then imposed.

Finally, there were a few bounties that England gave on certain exports from the colonies. That on naval stores began in 1705 and continued with but few interruptions until the Revolution. Though it accomplished little in the case of hemp and masts, it was more successful in that of pitch and tar. The bounty on indigo established in 1748 proved a vital factor in stimulating the production of that product. Such bounties, it should be remembered, were paid out of taxes levied on the people of England, who on more than one occasion protested against the arrangement.

Besides the restrictions imposed under the English commercial system the colonial traders had to face the regulations of other European nations. Holland adopted a policy of substantial freedom of trade except in her Far Eastern possessions and under the short-lived West India Company in the West; it was largely through this that her great commerce had been developed.

The colonies of Spain, on the other hand, were subject to the most strict control, only a few ports being open to trade and that was largely confined to carefully regulated fleets sailing between Spain and the colonies. Commerce between the Spanish colonies was very limited and their trade with foreign colonies generally prohibited, not to mention the heavy taxes imposed which fell with crushing weight on all trade. The system was so severe that it seriously retarded the sound economic

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development of the Spanish possessions and could not be strictly enforced. In fact throughout the colonial period the English, French, and Dutch vied with one another in carrying on a large volume of illicit trade with the colonies of Spain and in this rivalry the English met with growing success. A partial break in the system came in 1713 when by the treaty of peace England secured the right known as the *assiento* to supply the Spanish colonies with slaves and also one cargo of goods annually. It was not until after 1748, when the fleet system was abandoned, that many restrictions were removed; even then most trade with foreigners continued under prohibition.

The system of France was less repressive than that of Spain but generally afforded less stimulus and opportunity for individual initiative than that of England. During the first three quarters of the seventeenth century the trade of the French colonies was chiefly under the monopolistic control of various companies and developed very slowly while the foreign trade of France was carried on very largely by foreigners, chiefly the Dutch. Afterward under the leadership of Colbert, 1661-1683, many colonies were taken over and their development partly financed by the crown and their trade opened to all French subjects, while an elaborate system of protective regulations was developed designed to aid French shipping and industry and exclude foreigners from French trade. In 1698 by the treaty with England each country was excluded from the trade of the other's colonies. During the eighteenth century some of the trading company monopolies were reestablished but without success and were soon abandoned.

During this century there was a remarkable growth in the trade of the French West Indian sugar islands: Martinique, Guadeloupe, and, most important of all, the French half of Santo Domingo, now Haiti. Though the trade of Canada and Louisiana increased but slowly and was finally lost to France in 1763, the French West Indies enjoyed a growth unequaled by the possessions of any other nation in that group of islands, so that in 1776 Raynal estimated the value of their exported products at 100 million livres while that of the British West Indies was put at 66 million, the Dutch at 24 million, the Spanish at 10 million, and the Danish at 7 million. Such was the growth of the French West Indies that it became a serious question whether in the treaty of peace of 1763 it would be better for England to keep the little island of Guadeloupe or Canada.

These French islands depended on foreign markets for the sale of their molasses, which was practically excluded from France, and had to import nearly everything used in the way of manufactures, lumber, food supplies, and slaves from elsewhere. Since the output of lumber and foodstuffs from the other French possessions in America was insufficient to meet

their requirements, they soon came to depend on supplies from the British colonies or Ireland. The necessities of the case appear to have induced the French to refrain from enforcing very serious restrictions on the trade that thus developed.

In the development of the middle and New England colonies this market became a very important factor, for the rapidly growing surplus of their staple products could not be absorbed by the more slowly growing British West Indies. As Pitman well puts it, in the economic development of their colonies in America France was overbalanced on the side of tropical products, England on the side of products of the temperate zone. Under such conditions the regulations of either country imposed from military, political, or economic motives with the object of restricting the more natural economic process of territorial specialization and division of labor were sure to break down unless the machinery for their enforcement was elaborate and powerful, in which case the cost of enforcement, quite aside from other losses, often exceeded any gains obtained. History is full of examples of the futility and breakdown of such legislation and the example of colonial commerce is but one among many. The regulations of the various countries just described were seldom strictly observed. In general it may be said that the enforcement of the English regulations varied inversely with the strength of the economic interest to which it ran counter and directly with the power used to secure obedience.

The most common violations of the trade regulations of England on the part of the colonies consisted in a direct trade in enumerated products with the Continent, importation of goods from the Continent either directly or through the foreign West Indies, and engaging in forbidden trade with the foreign West Indies, particularly the French sugar islands. The extent of the smuggling trade we have no satisfactory means for judging but there can be no question that it was very large, especially during the first part of the eighteenth century and when a state of war existed. The stricter measures of enforcement that Great Britain adopted after 1763 were an important factor in arousing the antagonisms that brought on the Revolution. Still, the regulations were so general and sweeping that they did in a very appreciable measure shape the course of trade and give rise to political issues that played an important part in colonial history.

The Character and Growth of Colonial Foreign Trade. With this background of the underlying economic conditions and regulations affecting colonial trade in mind, we can now turn to a survey of the trade that actually developed. This survey can best be divided into two main periods: one ending about 1700 and covering the time during which all the colonies except Georgia were established and when the economic foundations upon which their trade was based were being laid; the second,

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covering the eighteenth century down to the Revolution when a rapid expansion of trade took place.

During the seventeenth century the growth of trade was relatively slow. The settlements first had to become firmly established so that they did not depend on outside sources of supply for the very necessities of existence and they had also to learn by much experimentation in which products they enjoyed such comparative advantages that they could expect to sell them successfully in outside markets. Naturally the greatest trade developed during this period was in those colonies that experienced the most rapid growth of population and that first produced, on an appreciable scale, commodities in demand in other markets; that is, the two groups made up by the New England colonies and the tobacco-growing colonies of Maryland and Virginia.

Virginia at the start sent out small quantities of a variety of such products as were ready at hand. Furs, lumber products, and sassafras seem to have been the most important; but with the introduction of tobacco and the rapid spread of its cultivation this soon became the great staple and, though small amounts of other products were included among the exports, tobacco completely overshadowed all others to the end of the colonial period. When Maryland was settled it also soon specialized in tobacco to the exclusion of nearly all other exports. The demand for the products of these colonies in England or on the Continent and the enumeration of tobacco resulted in their export trade being largely confined to that country, though some of the tobacco went to the colonies of the North. The dominance of this crop made these colonies more dependent on outside sources for other goods. Their imports therefore consisted chiefly of manufactured goods from England, wines, a few tropical products, and slaves from the West Indies and, on occasions, foodstuffs, or other supplies from neighboring colonies.

The New England colonies, finding that they could produce few things that were wanted in England, had a more difficult problem in finding a market for their surplus. Furs and such forest products as could be used in shipbuilding, as well as ships, found a sale in England, but the chief products derived from the farms and fisheries were not wanted in the mother country. At first the Dutch in New York, and occasionally the tobacco colonies, afforded some outlet for the sale of grain and livestock but this market was limited, and by 1640 the New Englanders had opened a trade with the West Indies where they found a steadily growing demand for their surplus of foodstuffs, fish, and lumber products. Soon afterward they started trade with the Madeiras and Spain. However, the rapid advance of the British West Indies was the chief factor in the growth of New England commerce during the second half of the century. The imports of the New England colonies consisted chiefly of manufactured

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goods, notably textiles and iron manufactures, from England; some tropical products, chiefly molasses, sugar, and rum from the West Indies, and salt and wines from Spain, Portugal, the Azores, and the Madeiras.

In the other colonies the growth of foreign trade was much slower during the seventeenth century. In New York during the Dutch rule furs and lumber products constituted the chief exports; after the English took possession in 1664, these continued to be the staples of trade. However, the slow growth of a farming population in the region contributory to New York City made possible some exports of grains and animal products and the resulting trade with the West Indies made up the bulk of the colony's exports by the end of the century. The growth of the settlements on the Delaware River was also checked by Dutch control and it was not until Penn established his flourishing colony that much trade developed. Furs and lumber products were the chief exports of the earlier decades and went to England; by the end of the century, a good start had been made in the exportation of grains and foodstuffs chiefly to the West Indies. The imports of these colonies were of the same general character as those of New England and came from the same sources.

The Carolinas were even slower in getting a start. Small quantities of naval stores from the rich pine forests and, as with all the colonies, furs and deerskins were among the first exports. Charleston was founded in 1670 but South Carolina had not during this period started upon the production of the great staples such as rice and indigo which in the eighteenth century became so important. At this time such trade as developed was chiefly in farm products sent to the Barbados whence many of the first settlers had come.

A general view of the situation at the end of this century, as far as the direct trade with Great Britain is concerned, can be gathered from the following table, though the figures are doubtless far from accurate. If we accept the usual estimate that the purchasing power of money at

TRADE BETWEEN GREAT BRITAIN AND THE COLONIES, ANNUAL AVERAGE 1698-1702¹
(000 omitted)

	Exports to Great Britain	Imports from Great Britain
New England	£ 33	£ 92
New York	13	35
Pennsylvania	3	13
Virginia and Maryland	239	192
Carolina	12	13
Total....	£300	£345

¹ Based on E. R. Johnson, "History of Domestic and Foreign Commerce of the United States," vol. I, p. 120, Washington, 1915.

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this time was around five times as great as it was about 1913, this would give a total of about \$17,500,000 at the 1913 price level, or, with an estimated population of 300,000, \$58 per capita. To this total for the direct trade with Great Britain should be added that with the Continent, Africa, and the West Indies. Although no definite figures are available, it has been estimated that, except in the case of Maryland and Virginia where nearly all of the trade was direct with Great Britain, this would bring the grand total for the other colonies up to nearly twice the value of their trade with Great Britain, though it may have been more.¹

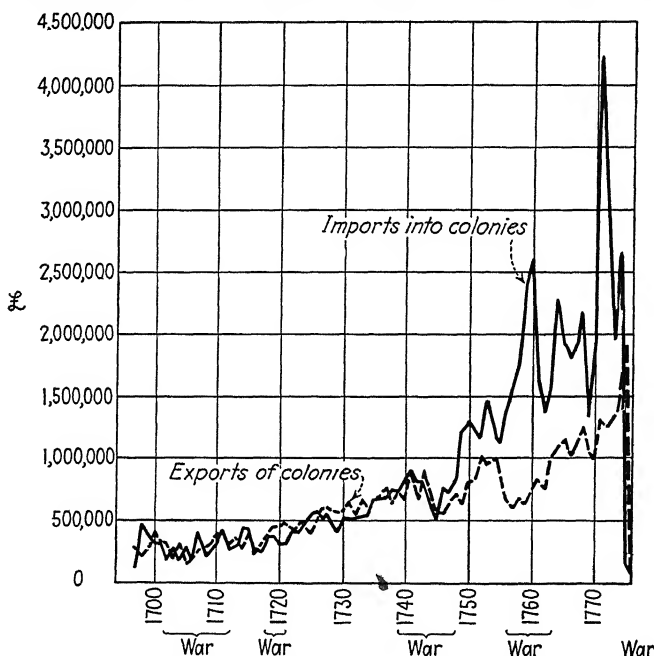


FIG. 6.—Trade between Great Britain and the American colonies, 1697–1776.

Growth in the Eighteenth Century. Based upon the foundations laid in the seventeenth century the trade of the colonies enjoyed a period of rapid expansion during the eighteenth century. For this period official figures are available covering the trade between Great Britain and the colonies and these are the basis of the chart on this page. Although the figures cannot pretend to much accuracy, since they were never carefully gathered, omitted smuggled goods, and were based on fixed official values rather than on market values that were tending upward after 1740, they probably fairly suggest the marked expansion, especially after about 1745, of this, the main branch of colonial trade.

¹ JOHNSON, E. R., "History of Domestic and Foreign Commerce of the United States," vol. I, p. 74, Washington, 1915.

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The most important developments of this period in New England were the expansion of the fisheries including the rise of the whale fishery, the continued growth in the export of ships and lumber products, and the rapid advance of the rum trade. On the other hand the exports of agricultural products failed to advance in proportion to the rest. Imports increased along with the exports and continued to be made up of much the same commodities as previously, though luxuries were more prominent. The greater portion of the exports went to the West Indies and the expansion of trade that took place was largely built up upon the West Indian commerce and the closely related slave trade. One of the most

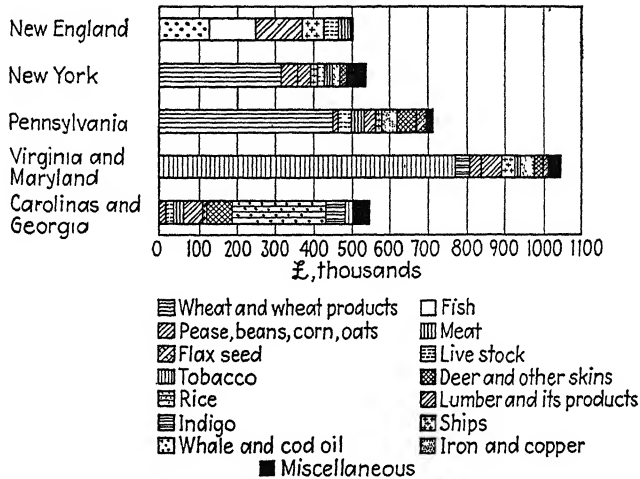


FIG. 7.—Exports of the colonies showing chief products. Estimated average annual value around 1768.

important features of the period was the rapid growth in the export trade in foodstuffs from the middle colonies. As population poured into the hinterland about New York and Philadelphia, a large surplus of grain and meat products became available and it found a market in the West Indies and southern Europe. The growing scarcity of furs after about 1740 greatly reduced that trade, but some ships were built for sale, some forest products were sent out, and a considerable export of flaxseed to Ireland arose. Imports consisted chiefly of manufactured goods from England, tropical products from the West Indies, and salt and wines from Spain or Portugal.

In the Southern colonies tobacco continued to be the chief export of Maryland and Virginia, though after the middle of the century the influx of settlers into the upcountry region resulted in some wheat and meat products for export. The exports of North Carolina and Georgia, mostly naval stores, rice, and indigo, remained insignificant almost to the

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end, though some of their products went out through neighboring colonies. South Carolina, after the introduction of rice and later of indigo, advanced very rapidly and by about 1770 her exports nearly equaled in value the exports of New England, though still far below those of Maryland and Virginia or the middle colonies.

By 1770, as indicated on the chart on page 152, the two great staples of the export trade were tobacco and wheat or wheat flour. They were about equal in value and together made up around half of the total exports. Next in importance, but far below them in value, came rice, the products of the various fisheries, then livestock and meat products, and lumber products. Still lower in value came the exports of skins and furs; ships; corn, peas, and beans; iron; minor products contributed the remainder. The great bulk of the imports were manufactured goods,

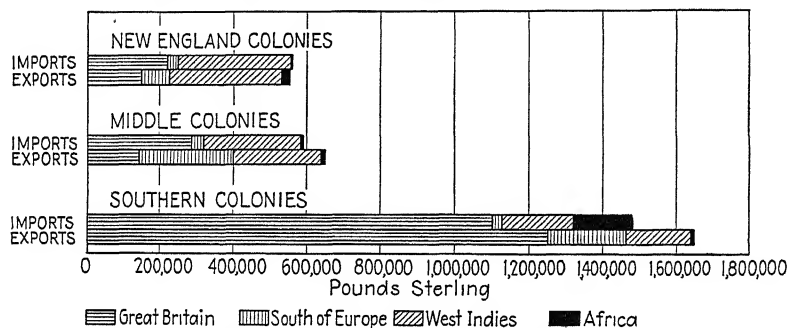


FIG. 8.—Imports and exports of colonies in 1769, by regions.

notably textiles and iron and steel products, imported from England, though about a quarter originated on the Continent, after which came the tropical products of the West Indies, slaves from Africa, and wines from Spain and Portugal or their possessions.

Some idea as to the volume and direction taken by colonial foreign trade just before the Revolution can be obtained from the above chart for the year 1769, though this was not an altogether typical year in that the imports into the New England and middle colonies from Great Britain were very much less than usual because of the nonimportation agreement. We may infer that normally over two-thirds of their imports came from Great Britain and most of the remainder from the West Indies; in the case of exports above one-half went to Great Britain, about a quarter to the West Indies, and a fifth to southern Europe.

Ships engaged in carrying this commerce were primarily concerned in going between ports where an adequate cargo was available so that they would not have to sail in ballast. Also, being solely dependent upon sail, they had to consider the existing trade winds. Hence vessels sailing from England and other parts of western Europe to America followed a

course southwestward till off the coast of Africa in the vicinity of the Madeiras and then turned westward toward the West Indies. On the return, taking advantage of the Gulf Stream as well as the trade winds, they would sail up the South Atlantic coast and then turn eastward toward Europe. The trade routes that developed in consequence were very varied but three main divisions can be distinguished. The first was the direct trade between the colonies and Great Britain. By far the most important portion of this trade consisted in the exports of tobacco and the return of manufactured goods and was carried on mainly by English merchants in their own vessels. In the Northern colonies the direct trade with England was small; a few vessels carried some of their products or goods from the West Indies or the Southern colonies to England and returned with manufactures.

The second division included the trade with southern Europe. Fish, grain, rice, and certain lumber products were the chief exports but the imports thence, chiefly salt and wines, were so small in bulk that most vessels would have returned to the colonies empty if they had sailed directly back. Hence a triangular or quadrilateral route was often chosen; some carried Spanish wool and iron or wines to England and then, if the ship was not sold there, returned to the colonies with manufactures; others went to Africa for slaves or to the Azores and Madeiras for wine and thence returned direct or by way of the West Indies. In addition a number of ships sailed from New England for Africa with a cargo of rum, then carried slaves to the West Indies, and finally tropical products and slaves to the colonies.

The third main division was based on the West Indian trade and this as well as the second division was largely carried on by ships and traders of the Northern colonies. The chief exports were fish, lumber, grain, and small amounts of other agricultural produce, meat, and livestock. As the imports thence, chiefly sugar, molasses, rum, salt, and small quantities of other tropical products or slaves, were insufficient to provide a cargo for many of the ships returning direct, a triangular course was often followed. In such cases the island products were usually carried to England and there the vessel was either sold or secured a cargo of manufactures and returned to the colonies.

The Balance of Trade and of International Payments. The term "balance of trade" is usually applied to the relation between the value of the exports and the value of the imports of a country in its trade with the rest of the world or its trade with a given country. Generally this balance is the most important item in determining the amount of money payments that different countries have to make to one another at any one period of time and thus in influencing the international flow of specie. However, there are numerous other items, usually called the "invisible"

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exports or imports, for which countries become indebted to one another such as loans, shipping charges, expenses of foreign travelers, immigrant remittances, and insurance in foreign companies. The total of these invisible items together with the commodity trade balance may be said to make up the balance of debits and credits in the account of a nation with the rest of the world, or to use a shorter phrase, the balance of international payments. Sometimes the term "balance of trade" is used to cover all these items, both the visible exports or imports of commodities and the invisible charges. It is less confusing, however, to limit the use of the term to commodity exports and imports and reserve the term "balance of debits and credits" or "balance of payments" for the total of all items, and such will be the usage in this book.

Bills of exchange are created when any country secures a credit in a foreign country through the sale of commodities, securities, services, etc. Usually in this country the person who makes such a sale draws a bill of exchange on the person in the foreign country who thus becomes indebted to him; the total of foreign credits thus determines the total supply of bills of exchange available at any one time. Since it is cheaper to pay a foreign debt by sending a bill of exchange instead of specie, the cost of shipping the latter ordinarily being greater, the people who owe money abroad try to buy foreign bills of those who have credits abroad and thus the total of foreign debits due at any time determines the demand for bills of exchange. The rate or price of foreign bills of exchange is determined by the relation of the total demand for, and the total supply of, bills available. If the demand is greater than the supply, the price when quoted in domestic currency will rise above par (the ratio where the bullion content of two currencies is the same) to a point called the "upper gold point" where it is just as cheap to send specie as to pay the high price asked for bills. Conversely, if the supply is greater than the demand, the price of bills will fall to the "lower gold point" where it is just as cheap to import specie. Thus the international flow of specie is determined in the last analysis by the total balance of debits and credits due at a given time, and the universally acceptable specie becomes the means for the final settlement of that portion of the balance of international payments which is not met by a sufficient supply of bills of exchange.

In this connection it is important to understand a point that has been widely ignored or little understood and of the truth of which history affords many examples, most recently in the period after the first World War, though legislators and others often disregard it. The principle is that a nation, just like an individual, cannot continue indefinitely to buy of others, as a group, more goods or services in value than it can sell to others as a group. A nation, like an individual, may be able to do so for a considerable period provided its credit in other countries is good so that it can

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borrow there; in the last analysis its credit and power to borrow will depend on its ability to pay its international indebtedness and that is founded on its ability to sell its goods or services to other countries. It was the failure to give sufficient recognition to this principle that constituted one of the most serious errors of the mercantilist doctrines and the commercial policy based upon them. In each country, with a few exceptions, they sought to secure a favorable balance of trade and an inflow of specie in their commercial intercourse with all other countries; yet it is obviously impossible for all countries to maintain such a condition for any appreciable period of time. Even many of the mercantilists were at times obliged to recognize the truth of the principle.

In the case of the colonies this principle was involved in the discussion aroused by the question how the colonies could find means to pay for the large importations of manufactured goods from England, if England or some other country did not import from them an equal value of commodities. Various writers of the time clearly pointed out that unless England was prepared to extend indefinite and constantly increasing credit, she must either buy commodities from the colonies equal in value to her sale of goods and services to them or else give them sufficient freedom in their export trade so that they could find elsewhere a trade with a sufficiently favorable balance to meet any deficiency in the amount due England arising from the shortage of exports sent to England. Unless this was possible the colonies would have to manufacture such goods as they used themselves. England did not want them to do that either, but there was no other way out of the dilemma and so the mercantilist found himself between the Devil and the deep sea. The unwilling and partial recognition of the hard facts of the situation arising from the economic principle involved was largely responsible for many of the cases, notably the trade with the foreign West Indies, where officials were willing to overlook violations of the laws regulating colonial trade; in other cases it led to considerable modifications of the regulations themselves or else to extensive smuggling.

The actual situation as regards the balance of international debits and credits that confronted the colonies can be described only in general terms owing to the incomplete statistics as to trade and the almost total lack of figures for the invisible items in the balance. In the first place, during the seventeenth century the process of actually establishing the colonies involved a very considerable outlay of capital on the part of those in England who helped to promote these enterprises as well as on the part of those who migrated to the colonies with money and goods. In the latter case, since both owners and capital were transferred to the colonies, it had no effect on the international balance; in the former case the English investors expected to secure a return in the form of profits

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and perhaps eventually of their capital. In this many were destined to be disappointed, and the investors had instead to accept heavy losses in the balancing of accounts.

In the course of the century, however, as population increased and the resources of the colonies were developed, a surplus of commodities for export became available, the proceeds from the sale of which could be used to pay for imports. At the close of the century in the direct trade with England it was only the tobacco colonies that had a decided favorable balance, while in Carolina it was about even. In the Northern colonies, on the other hand, the balance in this trade was unfavorable. This was settled, we must conclude, chiefly by the proceeds from the favorable balance in their trade with the West Indies and southern Europe. In part, however, it was met by credits derived from the invisible items such as the sale of ships (which were not included among the figures for exports) and from the charges that foreigners incurred for the use of colonial ships. The credit from the excess of exports in the tobacco colonies was largely offset by debts arising from their unfavorable balance in the trade with the West Indies and in part from shipping charges due to shipowners in England or the Northern colonies, as the Southern colonies possessed little shipping themselves.

During the eighteenth century up to the Revolution the main features of the situation regarding the international indebtedness of the colonies indicate a continued development along much the same general lines that had been started during the preceding century. Up to about 1745, as far as we can judge from the official figures (see chart on page 151), the total balance in the trade of all the colonies with Great Britain was fairly even though more frequently in favor of the colonies. From that date on to the Revolution a rapidly increasing unfavorable balance developed amounting in the decade 1765-1774 to an average of £1,089,-290 a year. In the trade of the different groups of colonies the favorable balance of the tobacco colonies continued to about 1768, when increasing imports practically wiped it out; to this favorable balance Carolina after 1711 added a considerable quota up to the outbreak of the Revolution. In the colonies to the north imports from Great Britain increased much more rapidly than exports to that country throughout the period, notably in Pennsylvania, and this more than any other thing was responsible for the growing total of the balance due to Great Britain. In addition to this the trade with Africa also showed an unfavorable balance.

The rapid growth of this debit trade balance was made possible only by the simultaneous advance in the favorable balance of trade with the West Indies and southern Europe. Although the favorable balance in the West Indian trade has been chiefly emphasized by most writers, it may well be questioned whether it was as important near the close of this

period as that with southern Europe, which grew very rapidly during the eighteenth century. In fact, the official figures for 1769 given in the chart on page 153 show a slightly unfavorable balance in the trade with the West Indies; that this was not the usual situation during this period seems well established. Through this West Indian trade the colonies obtained specie, bills of exchange on England, or goods carried direct to England; in the trade with southern Europe, either bills on England or commodities that were carried to England and sold, and the proceeds from their sale together with the specie and bills of exchange and the growing volume of English credit extended to them were the chief means whereby the colonists met the debts arising from the unfavorable balances in their trade with Great Britain and Africa.

The invisible items probably furnished some additional credits, chiefly from the sale of ships and from freight charges since colonial ships carried about two-thirds of their trade, though only a small portion of that direct with England. These credits were partially offset by the charges for marine insurance, since it is likely the greater portion of the insurance carried was underwritten in England. How much of a part in the balance of international indebtedness was played by the extension of English trade credit or the investment of English capital and the resulting interest charges we have no means of judging; but it seems probable, however, that credits obtained from new loans and investments exceeded the debits arising from interest charges and the repayment of old loans or investments. For the periods of war, there were also credits arising from the sale of colonial supplies to the British army and navy. Throughout the colonial period, however, the balance of trade was by far the most important factor in determining the balance of international indebtedness and the movement of specie.

CHAPTER IX

CAPITAL AND FINANCIAL INSTITUTIONS IN THE COLONIES

Introduction. Capital is one of the four classes into which economists have divided the agents of production. As an agent of production, and one that has become increasingly important as time passes, it is essential to society that conditions shall be such as to foster its accumulation and further its most economical use. In determining these conditions the financial institutions of a country play a vital part.

The supply of capital is commonly said to be determined by the amount of wealth produced that it is possible to save—the savable fund—and by the willingness of those who can save to save—the effective desire of accumulation. The savable fund depends on how much surplus is produced over and above what is necessary for subsistence. The effective desire of accumulation depends on those conditions that make a person willing to forgo immediate consumption of wealth for the sake of having more in the future, such conditions as foresight for possible future wants and such social security as makes it probable that one who saves, or those for whom he saves, will in the future enjoy the fruits of his sacrifice and not be deprived of them.

For its most economical use, it is desirable that such capital as has been saved shall be used in the process of production by those who can make it most productive. Since those who own capital are often not in a position to use it in the most productive manner themselves, it is desirable that there should be facilities for transferring it to those who can so use it. This is done, where the owner does not use it himself, by lending it to others or investing it in enterprises the control of which rests chiefly or entirely with others. Some borrowing is for the purpose of obtaining money to be used in consumption. A borrower is said to receive credit from the lender. This credit is based on all the factors that create a belief in the lender that the borrower will be able and willing to repay the debt when it falls due. It is therefore clear that the better the facilities existing for lenders to determine with accuracy the credit of borrowers, the greater is the likelihood that capital will flow into the hands of those who will use it most productively. Credit institutions increase the mobility of capital and facilitate its transfer.

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In carrying out this transfer or distribution of capital, exchange takes place, an exchange of present control of funds for a promise to return them in the future, usually with interest. To carry out this exchange a form of market organization is necessary. The more highly organized the market, the larger the group of those who have capital to lend, and the larger the group of those who wish to borrow capital who are thus brought together, the more complete the information available to each, the greater the security, and the better the facilities for the transfer of capital, the greater are the chances of its being distributed so as to be used in a way to promote the most economical satisfaction of society's wants. It is for the furthering of this process of accumulating and distributing the capital of industrial society and facilitating all the necessary transactions that our financial institutions have developed and function. These functions and objectives should be kept in mind in the study of the actual conditions affecting the accumulation and distribution of capital in the colonies, to which we now turn.

The Supply of Capital. As has already been pointed out, the process of establishing the colonies necessitated a considerable outlay of capital which was provided by the "adventurers," proprietors, and others who promoted colonization and by those who migrated to this country with their accumulated savings. Europe thus furnished the initial supply. The further increase in the supply came from two sources: the additional inflow from Europe and the accumulation that took place within the colonies through the saving of the surplus wealth that they produced.

Although we have no means of measuring it, we can be certain that the first of these two sources was relatively unimportant. The steady inflow of immigrants added something to Europe's contribution; but for the most part these people were poor, having little in the way of worldly goods to bring and often insufficient funds to pay for their passage across, so their contribution to the supply of capital thus brought was small. Another, and one of the most important, ways in which European capital was obtained was through the credit that British merchants extended to the colonists to enable them to buy goods. As the wealth-producing power of the colonies increased and their prospects of great economic development became more certain, the willingness to extend this credit became greater. Typically, such advances were made to the merchant traders of the Northern colonies importing goods from England or to the wealthy Southern planters purchasing goods or slaves. Many of the latter group, apparently more inclined to live up to or beyond their income,¹ were often heavily in debt as a result, and it was among

¹ Prof. M. W. Jernegan believes that the tobacco planters just before the Revolution were generally losing money and were living off their capital in land and British credit.

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them that much the larger proportion of indebtedness to Great Britain was found when the question of payment of such debts arose after the Revolution. This fact, too, was not without significance in their attitude at the time of the Revolution. That the amount of such trading credits must have been considerable can be judged from the fact that about a decade before the Revolution the total was estimated at from £3,000,000 to £5,000,000. Outside of trade not much foreign capital appears to have been invested in the colonies. In the case of some of the larger manufacturing enterprises it is found occasionally, and doubtless small amounts flowed into all branches of economic activity. Although some of the foreign private credit that the colonists obtained from abroad was diverted to consumption, most of it was added to the productive power of the country, though of course the interest earned was usually returned abroad.

For the greater portion of their supply of capital the colonists were dependent upon the amount that they could accumulate as savings from the product of their own activities. With the growth of population and the supply of labor, the introduction of slightly better methods and more suitable crops in agriculture, the expansion of the fisheries and lumbering, the rise of manufactures, and the development of trade which occurred with expansion of the markets—in short with all economic advance—the productive capacity of the colonies rapidly grew. And as the annual output of wealth per capita increased, the savable fund was augmented. One factor in this was the comparative freedom from the destruction of wealth through the ravages of war, from which the continent of Europe suffered so much. Such losses from war as occurred fell chiefly upon the colonists' foreign commerce; aside from Indian depredations, the destruction of wealth in the colonies from this cause was relatively small. Nor did the cost of carrying on war elsewhere greatly deplete their economic resources. This outlay—and it was a large item—was met chiefly by Great Britain; though the portion borne by the colonists was slight, they often had difficulty in paying it. In these ways the conditions in the colonies promoted the rapid increase of the savable fund.

The Willingness to Save. Conditions were also favorable to saving—the effective desire of accumulation was strong. The comparative absence of property losses in war, the stability of governmental legal institutions, and the general security of property rights as then recognized offered assurance to those who saved that they would be permitted to enjoy the 'fruit of their abstinence and so served as inducement. The ambition and industry of the colonists promoted the production of wealth; their thrift and frugality furthered its accumulation as capital. The energy of the Scotch-Irish, the shrewdness and thrift of the Quakers, the ascetic morality of the Puritans frowning upon high living without

discouraging thrift, all played an important part in the process. The absence of this widespread thrift was most marked among the easy-going, hospitable, luxury-loving planters of the South; even they often accumulated large estates and many slaves, though debts were apt to accompany the process.

Such facilities as the modern savings bank were not available then, but they were less needed. The demand for capital was so universal and the opportunities open to everyone for its use, even in small amounts, were so numerous (in part a product of the lack of specialization), that there was little difficulty in finding close at hand, either in some activity of the individual or among his neighbors in the community, a chance to use it profitably. These same conditions made the lack of good means of communication and the relative scarcity of credit facilities for the easy distribution of capital a less serious obstacle in the way of its being used where most needed than would otherwise have been the case. Nor were corporate securities, such as people of today so commonly invest in, generally available; though we do read of some buying and selling of the stock of English companies. Provincial bills of credit, other than those used in circulation, representing the debts of the colonies were sometimes sold and, in a small way, afforded a chance to invest savings. Some, too, hoarded small amounts of specie for a time of need. But most of the saved wealth was quickly absorbed in some undertaking in the extractive industries or trade or manufactures in which the owner or some neighbor in the vicinity was interested. The supply of capital in any community thus grew chiefly through local accumulations. It should be noted, too, that while this supply was increasing the colonists were raising large families and also using a considerable amount of their income to better their standard of living. Yet such were the conditions in this rapidly growing country that, in spite of the inroads of these increasing family expenditures upon the savable fund, the accumulation of capital in the colonies advanced at a fairly rapid rate, especially during the eighteenth century.

The Demand for Capital. In a new and rapidly developing country the demand for capital is always great. Such a country has not had time to accumulate a supply to meet its steadily expanding wants and the opportunities for its use, which, though apt to vary greatly in different lines, are to be found in practically every branch of economic activity. Yet most lines of business as carried on in colonial times did not necessitate a large amount of capital. Typically small-scale production prevailed and, in the absence of the extensive use of machinery which marks modern production, particularly in manufacturing, an individual who had at his command only a small amount of capital was in a position to engage in such industries without a serious handicap. Only in a few lines of activity

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do we find relatively large amounts used in carrying on an enterprise. Foreign trade and shipping were the most important capitalistic enterprises of the day; through them the merchant princes of the period accumulated and invested their fortunes. It was because of the relatively large amount of capital required for the purchase of ships and goods for trade that people often joined together as partners, sharing in the profits and losses in proportion to their investment.

Outside of foreign trade the largest amounts of wealth used in single enterprises were found in the case of the Southern plantations where the sums invested in land, slaves, and plantation equipment by the owner were often very considerable. In manufacturing, on the other hand, the capital invested in any one plant was seldom very large; during the eighteenth century it was usually possible for a person out of his own savings to accumulate a sum sufficient to engage in such enterprises, though here, as in every line, a small amount of temporary borrowing on account was common. As the mass of those engaged in local trade and farming used relatively little capital, the plantation owners of the South (to whom might be added the descendants of the large landholders in New York) and the merchant traders of the North made up the great portion of the wealthy classes of the colonial period; the rise of this moneyed aristocracy enabled it to play an increasingly important part in the economic, political, and social life of the times.

The common medieval objection to taking interest, which had become embodied in the canon law, was challenged at the time of the Reformation by such men as Calvin, and in England the charging of a fixed rate of interest was first made legal in 1545, the maximum rate being set at 10 per cent. Subsequent acts reduced this rate to 8 per cent in 1624, 6 per cent in 1660, and 5 per cent in 1713, at which level it remained until the repeal of all usury acts in 1854. In time practically all the colonies fixed their own legal interest rates. In 1661 Massachusetts fixed the rate at 8 per cent, in 1692 Maryland adopted 6 per cent; during the eighteenth century this latter rate came to be the one most generally chosen, though by 1776 some colonies permitted 7 or 8 per cent and in Virginia 5 per cent was the maximum. What the actually prevailing rates were and whether the usury laws were commonly evaded, as is likely, we have little basis for judging. It seems probable that the nominal rates were about the maximum allowed, although there were many devices for securing a higher return in practice, and in a money market so decentralized and so lacking in organization as was found in the colonies there must have been marked variations. According to Franklin the prevailing interest rates were between 6 and 10 per cent.

Colonial Money. Wherever trade or exchange of goods exists some form of circulating medium or money is desirable to facilitate the process,

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Money facilitates exchange by performing certain functions usually classified as (1) serving as a standard of value, that is, a common denominator by which the values of goods are measured; (2) serving as a standard of deferred payments, whereby values borrowed at one time to be returned later are specified in terms and amounts of this standard; (3) serving as a medium whereby goods are exchanged for money, which can then be reexchanged for goods, instead of exchanging goods direct for other goods as under a system of barter. Sometimes, too, money is used as a storehouse of value, that is, it affords a convenient method by which to keep wealth.

In the early period of settlement, when there was little trade and it was largely confined to each locality and money was scarce, the system of barter was generally used. Where each community was relatively self-sufficing economically and the commodities exchanged were small in number and in general demand, this system of barter, in spite of its obvious cumbersomeness, was not so serious an obstacle to exchange as would be the case today. Hence, barter was common, particularly in the rural and frontier sections, throughout the colonial period. The difficulties of pure barter were in part overcome by the fact that the colonists did have what served as a standard of value or money of account. This was the English system of reckoning values in terms of pounds, shillings, and pence.

The problem of securing a satisfactory medium of exchange or money was a serious one throughout the colonial period, and the unsatisfactory character of the various mediums used proved a constantly disturbing factor in trade and industry. In order to understand the history of colonial circulating medium at least three important facts must be kept in mind since each had a marked influence upon that history and, in truth, on much of the subsequent monetary history of the country as well.

(1) A currency made up of gold and silver specie is expensive, and as the colonies did not themselves produce gold and silver they had to obtain it elsewhere by trade. Since the colonies were poor and did not want to go to this expense, they sought cheaper substitutes. (2) Capital was scarce and credit facilities poor and many believed that these deficiencies could be in part overcome by a more abundant supply of money. Also there was a large debtor class, which realized that an increase in the quantity of the circulating medium would tend to decrease its value and so enable them to pay off their debts more easily with the cheaper money, where those debts were expressed in terms of the circulating medium. This fact we shall see has been a very important influence throughout the monetary history of the country. (3) The revenue of the colonial governments was small and the people were strongly opposed to taxation. There was, therefore, especially in times of unusually heavy expenditures, a great

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temptation to borrow by using the colony's credit.¹ The use of its credit by a colony very generally took the form of paper money, often called "bills of credit," which became a part of the circulating medium. In fact, as we shall see, the disturbing reaction of the fiscal needs of the government upon the circulating medium has been an unfortunate feature of our economic history down to this day.

Commodities Used as Money. At first, in the absence of any appreciable supply of specie, the colonists used as a medium of exchange such commodities as were immediately available and widely traded in each section: tobacco, wheat, corn, cattle, beaver skins, and the Indian wampum. Laws were passed providing that various dues and taxes could be paid in such commodities; often official salaries were fixed in the same way. The unsatisfactory manner in which these commodities performed the functions of money well illustrates the characteristics desirable in a good circulating medium.

In the first place, although the commodities did possess the advantage over paper money of having value independent of their use as money, that value was far from stable, being subject to rapid and marked fluctuations. Although the laws providing for the receipt of such commodities for taxes usually specified at how many pence each pound of tobacco or other commodity was to be reckoned, the market price often varied widely therefrom. If it went above the legal ratio the taxpayer suffered or found another less expensive medium for payment; if the market price fell below the legal ratio, as was generally the case, the real revenue of the colony suffered. A similar difficulty is illustrated by the well-known case of the Virginia parsons. Their salaries were fixed by law at a certain sum payable in tobacco, valued at a fixed price. When tobacco fell in price they suffered; when it happened to rise to a high figure, the colony passed a law permitting payment in cash at a rate below that at which tobacco was selling and so reduced the amount the parsons received. It is obvious that such an unstable standard of value and of deferred payments hindered and disturbed all business by its uncertainty and brought unjust gains and losses to debtors and creditors, as well as to producers and consumers.

Other difficulties in the functioning of these forms of money also arose. The commodities used were not uniform in quality; one pound of tobacco might be much better than another and beaver skins varied greatly in value. Attempts were made to grade and standardize the commodities, but the situation was complicated and was a constant source of dispute. Another difficulty arose from the fact that, unlike gold or silver, these commodities were more or less perishable and great care had to be taken

¹ "Why tax the people," in effect said one member of the Virginia assembly, "when the colony can pay its expenses by setting the printing press at work?" Such an appeal has not lost its force even today.

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of them to prevent deterioration. For this reason the colonies often suffered losses on the goods paid in as taxes and any person who held this form of currency was likely to suffer in the same way. The fact that the commodities used as money were not easily transportable and were very bulky in proportion to their value caused further inconvenience, and necessitated warehouses for storing them in any quantity. In Virginia the use of transferable warehouse receipts for tobacco so stored helped to overcome one inconvenience. In short, when tested by such characteristics of a good circulation medium as stability of value, durability, homogeneity, and transportability, all these commodities were less satisfactory than gold or silver; they did, however, generally possess a fair degree of divisibility and cognizability and had value independent of their use as money. Because of these defects the commodities used could not economically perform the functions of money; trade and exchange were seriously hampered and much injustice resulted. Hence the colonists found it desirable to secure a better circulating medium.

Colonial Specie Money. One striking feature of the situation as regards specie money was that almost none was coined in the colonies. They produced no gold or silver and not much copper and the poverty of the colonial governments made them disinclined to go to the expense of importing bullion and minting it. The best known example of such an attempt was that of Massachusetts where the Pine-tree shilling was coined between 1652 and 1684. This coin was made to contain 22.5 per cent less bullion than the English shilling, apparently with the definite purpose and expectation that it would not flow out of the colony. This was based on the economic principle that cheap money drives out dear money, commonly known as Gresham's law. Though there were attempts to establish a mint in some of the other colonies, very little seems to have come of them, and England generally opposed any such action as infringing upon royal prerogatives.

In the absence of coins minted in the colonies such specie as circulated was of British or foreign origin. Some British coin was brought by those who migrated to this country, some was brought in by traders or by vessels stopping at the ports, and some bullion came in to pay the expenses which the British army or navy incurred. But the amount of specie received from these sources was not large since England prohibited the export of her coins. The bulk of the colonial specie was of Spanish origin, a result due primarily to two things: (1) The Spanish possessions in Mexico and South America were then producing the great portion of the world's output of silver and from this source it was being distributed over the world through the channels of trade. (2) The trade of the colonies with the West Indies showed a favorable balance and a part of this was settled by specie payments chiefly of Spanish mintage. There was also a

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balance favorable to the colonies in the trade with southern Europe and, although it appears to have been more generally settled by bills of exchange drawn on England, it doubtless brought in some specie in addition.

The basis of the Spanish coinage was the silver piece of eight reals until about 1728, when Spain began to coin the dollar in its place; this coin, with a slightly smaller bullion content, Congress later adopted as the unit of our monetary system. There were also the pistareen, equal to two reals, and the pistole equivalent to about four dollars. During the eighteenth century a considerable amount of gold was being produced in Brazil, then a possession of Portugal; from this source gold began to flow into the colonies, chiefly in the form of the Portuguese johannes, or joe, and the moidore, equal respectively to about sixteen and six Spanish dollars. In addition to the Spanish and Portuguese coins there was some French specie and a miscellaneous assortment from the mints of other European countries. Until well into the eighteenth century the specie and bullion spent in the colonies by the pirates was another source of supply. Though the total supply of specie existing in the colonies is unknown, it has been estimated at around \$1 million in 1700 and at \$10 million to \$12 million about 1775.

One difficulty arising from the presence of this foreign coin was that it did not coincide with the English system of pounds, shillings, and pence which was the money of account. This not only complicated reckonings but opened an opportunity for legislation designed to attract foreign specie by overvaluing it. Thus the Spanish piece of eight had a bullion content equal to about 4*s.* 6*d.* sterling; yet the various colonies passed laws specifying that it was to be accepted at a higher value ranging from 4*s.* 8*d.*, to 8*s.* Each colony hoped by so doing to attract the Spanish silver; but they either failed to understand or ignored the fact that any such gain could be only temporary, that in their rivalry they would only counteract one another's efforts, and that in the long run the result would tend to be only a higher level of prices for commodities. Like so much economic legislation we shall find, particularly in the field of money, they sought to obtain certain results by the easy method of merely passing a law without first attempting to obtain a clear idea of the economic forces and principles involved in the problem upon the action of which the ultimate success of the law would depend. As one governor of New York wrote, " 'Tis not in the power of men or angels to beat the people of this continent out of a silly notion of their being gainers by the augmentation of the value of plate." The colonial rivalry in these measures to attract foreign specie was most active near the end of the seventeenth century. In 1704 a royal proclamation set 6*s.* as the maximum value at which the piece of eight was to be accepted in the colonies—

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whence the term "proclamation money"—but outside of Virginia and Maryland this limitation was generally evaded.

Complaints about the Scarcity of Money. Another illustration of much that was ignorant or unwise in monetary legislation is afforded by the colonial paper-money issues. The complaints about the scarcity of money, so constantly made in all the colonies, were an important factor in the numerous issues of paper money that marked the currency history of the eighteenth century. The reasons underlying this popular cry were various and, as it is a cry that constantly reappears in the country's economic history, it is very important to understand these reasons and the extent to which they may be thought to justify an effort to increase the supply of money or credit.

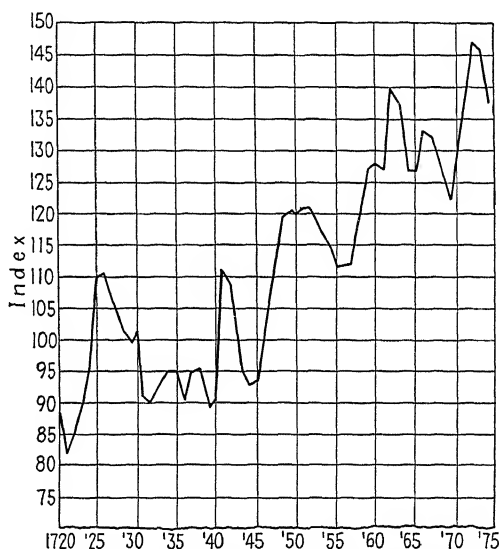


FIG. 9.—Annual indices of wholesale prices of 20 commodities in Philadelphia, 1720–1774 (arithmetic average). Base: monthly average, 1741–1745. (Based on Bezanson, Gray and Hussey, "Prices in Colonial Pennsylvania.")

The most common reasons back of this complaint may be classified as follows. First, the scarcity of capital, always marked in a new and rapidly developing country, made it difficult for many people to find loanable funds that they could borrow; this tended to make interest rates high. Except temporarily, this difficulty could not be overcome by increasing the supply of money since in the long run the increase raised the price of goods and services and necessitated borrowing just so much more money to buy the same quantity as before. Second, the debtor class always stands to gain by the rise in prices which is expected to result from an increased supply of money, since by selling their goods or services

at a higher price it is just so much easier for them to pay off their debts. Obviously their creditors stand to lose in the process since the purchasing power of the money repaid them has thus been reduced. However, if the general price level has fallen in the period intervening between the creation of a debt and the date when repayment is due, the debtor can justly argue that an increase in the supply of money designed to raise prices to the former level is equitable so far at least as the debtor-creditor relationship is concerned. Historically, it is under these latter circumstances that the most insistent complaints about the scarcity of money have arisen from the debtor class.

The aforementioned circumstances are also a factor in the third cause for complaints that arise about a scarcity of money when, for whatever reason, producers find difficulty in selling goods or consumers in buying them, a condition which in time of depression becomes widespread. Although an increase in the circulating medium may have little effect in removing the fundamental causes of the trouble, its stimulating influence will provide some relief even if only temporary. Moreover, there are cases where the main immediate cause of the difficulty is a rather sudden decrease in the supply of available money. Such cases were not uncommon in the colonies where, in the small communities with poor facilities for securing loans quickly from elsewhere, the effects of war or a severe drop in the price of a dominant staple or the retirement of a large issue of paper money might seriously deplete the customary supply of money, and a temporary addition might have a beneficial stabilizing effect. Much less frequent are the cases where long-run trends create a relatively enduring scarcity of money leading to a prolonged decline in the general price level and in which measures designed to increase the circulating medium may be considered justifiable.

A fourth cause of complaint may arise not because of a scarcity of circulating medium in general but because some particular element in the medium essential for certain transactions has become scarce, such as small change, or one of the metals in a bimetallic system, or specie in any form. In the colonies the last-named was the most common basis for this type of complaint. In the eighteenth century, especially when widespread resort to paper money had driven most of the specie out of general circulation, it was not uncommon for some event, particularly the reaction of war upon foreign trade, to drain off much of the small stocks of specie kept in private hoards to be used for certain domestic payments or in meeting foreign debts for which paper money could not be employed. This was a frequent difficulty and one not subject to quick remedy in a world that required months instead of hours or minutes to shift control over specie from country to country, even assuming a loan could be obtained.

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It will be clear from the foregoing that complaints about the scarcity of money need to be approached in a rather skeptical attitude when the question as to their justification is under consideration. Certain of the difficulties that are the basis of such complaints, as the scarcity of capital, cannot be remedied by more money; most of the other causes for complaint, where there can be said to be a legitimate basis, are of a temporary character. The important thing is to make sure that any addition to the circulating medium that is made to meet this need is not excessive and also only temporary, though experience shows this is very difficult to accomplish. Compared with others, the number of cases where the basis of the complaint is a real scarcity of some duration—say a decade or more—is relatively small, yet it is such that generally have the soundest justification. As long as there is always a large group that stands to gain temporarily, if not in the long run, through an increase in the supply of money or credit and as long as there is a still larger group that believes, however mistakenly, that it will also gain while the groups that will lose are inert, ignorant, or weak in numbers, the demands for this form of relief are very apt to be met, as will appear frequently in the subsequent narrative.

The Issues of Paper Money. The first issues of paper money in the colonies and, later, the largest issues were not due to complaints about the scarcity of money but to the need for extraordinary revenue arising from war expenditures and the difficulty in meeting this need, partly owing to the general hostility to taxation and partly to the lack of ready facilities for borrowing by other means than resort to the printing press. There then began that disturbing reaction of the fiscal needs of the government upon the monetary and credit structure which has continued to be a source of trouble down to this day.

The first regularly authorized issue was put out by Massachusetts in 1690 to help pay the expenses of the military expedition against Canada, since the unpaid soldiers refused to wait for taxes to be collected and threatened to mutiny. Next came South Carolina in 1703 when notes were issued to meet the outlay involved by the attack on the Spaniards; before Queen Anne's War was over New Hampshire, Rhode Island, Connecticut, New York, New Jersey, and North Carolina had joined the list. Though not generally made legal tender these bills of credit were usually acceptable for taxes and were accompanied with provisions for levying taxes to provide funds for their retirement within a few years—the policy favored by the British authorities at this time. King George's War led to new issues for purposes of defense and brought the first issues for this objective in Pennsylvania and Delaware. Finally, the French and Indian War, during which Virginia and Georgia fell back upon this expedient, led to a larger batch of issues than ever before.

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A second type of colonial paper-money issues was the notes put out in response to the complaints about the scarcity of money and credit. Though seldom so large as those arising from fiscal needs, they were to be found in practically all the colonies and tended to augment the general monetary confusion. These notes were commonly put out as loans to individuals in limited amounts, bearing about 5 per cent interest, repayable over a period of several years, and secured by land or other property. The first regularly authorized public loan bank of this type was started in South Carolina in 1712 and the plan was so popular that it was at once adopted elsewhere. Colonies having experienced the effects of this simple use of the printing press in meeting wartime needs now sought reasons for continuing its use in time of peace. Issues now began to be put out to meet ordinary fiscal needs and also to replace or, if funds were not at hand, to pay off the war issues that were being retired, on the ground that otherwise a scarcity of money would develop. The method of putting out an issue as a loan made a special appeal to all those who wished to borrow and also to those wishing to lower taxes, because the interest received yielded a revenue which in some cases proved sufficient to meet the ordinary expenditures of the province.

Massachusetts adopted this device in 1714; the next year Rhode Island started upon her notorious career which brought forth nine such issues; New Hampshire adopted the plan in 1717. A period of depression led Pennsylvania, Delaware, and New Jersey to authorize loan issues in 1723, and North Carolina started in 1729. In Maryland the opposition to such action was not overcome until 1733, at which time a portion of the issue was given away to hasten the process of getting it into circulation. In 1737 New York authorized an issue to be used chiefly for loans but partly to pay debts. Georgia adopted the idea in 1755 and Virginia would have done so at the same time but for the governor's veto.

A third type of paper circulating medium, though used only for a brief period and never large in volume, served to add to the confusion. This was similar in purpose and character to that put out by the public loan banks but was issued by groups of private individuals. Generally the notes were secured by real estate—whence the term “land bank”—and a promise of the borrower to repay with interest within a specified time. In substance it was a device whereby a group borrowed the notes and then used them to buy goods or pay debts, provided they could find others willing to accept them. Several proposals for such a scheme were formulated in Massachusetts in the latter part of the seventeenth century though whether any notes were actually issued is not clear. The decade between 1730 and 1740 brought the fruition of such schemes in New Hampshire, Connecticut, South Carolina, and Massachusetts, those of the last-named colony being the most famous. The controversy aroused there

led to an appeal to the English authorities, which in 1741 resulted in prohibiting all issues of this type by extending to the colonies the Bubble Act of 1720.

The extent to which these various types of paper money were employed in the different colonies varied greatly. In New Jersey, Pennsylvania, Delaware, and Maryland they were rather carefully controlled; any resulting depreciation was so slight that it has been claimed that their use there had a beneficial stabilizing influence. In New York the issues were fairly moderate up to 1746 when marked depreciation set in; in Virginia, though starting late, the issues soon became excessive. The greatest excesses, however, were found in the Carolinas and in New England. In the former the paper money fell to about one-tenth its value in sterling; in Massachusetts and Connecticut by 1750 the depreciation was about the same. At that time, however, Massachusetts took advantage of the receipt of a large amount of bullion sent over by England to reimburse the colony for its outlay in the recent war and redeemed all of its paper money at the ratio of about $7\frac{1}{2}$ in paper for one in specie. This example was at once followed by Connecticut. The most extreme case was Rhode Island for there the governmental setup provided fewer checks upon popular demands than existed in practically all the other colonies. One issue followed another in quick succession and in rising amounts until 1750 when nine had been authorized and only England's intervention stopped still more. The depreciation on the early issues finally reached 23 to 1.

The experience of the colonies only too well illustrates the temptations and dangers involved in the resort to paper money. Once started on the downward path, the impulse to continue was hard to resist. So new issues followed, frequently before the old had been retired through the receipts from taxes, and, since the levying of adequate taxes was constantly postponed, the outstanding issues steadily rose in amount. As depreciation then set in, specie was driven from circulation and prices rose. The rise in the price level then led to renewed complaints of the scarcity of money and the demand for still more. As Bullock says, "The experience of the colonies demonstrates conclusively the impossibility of satisfying the desire for 'more money' by issuing paper currency." Theoretically, in such a situation as existed in the colonies where credit institutions were poorly developed and where the supply of money was subject to rather violent fluctuations, there was more than usual that could be said in favor of the use of paper money as a stabilizing factor provided the issue were properly controlled. Practically, such control is extremely difficult at the best and in the colonies it was seldom really attempted. Perhaps the best that can be said of the device as actually employed in most of the colonies is that, in a social organization where the influence of the well-to-do

groups was fairly strong, it proved one of the chief means whereby a large group of the less wealthy, chiefly the debtors, were able to manipulate conditions affecting the distribution of wealth to their own advantage.

Moreover, the scarcity of specie of which the colonists so frequently complained was fundamentally, though not necessarily in every case, due to their own action in putting out such quantities of paper money. They generally put the blame for this scarcity upon the outflow of specie to England to meet an unfavorable trade balance, either ignorant or unmindful of the principle that even in those days there was sufficient freedom in the movement of goods and specie in international trade so that their specie would not have been permanently drained off had they chosen to remain on a specie basis. This attitude will appear less surprising if we remember that it was not until after the controversy aroused in England over the issue of inconvertible paper during the Napoleonic Wars that this principle secured general acceptance. Nonetheless there were those in the colonies who clearly recognized the real cause of the scarcity of specie. In proof, they pointed to the fact that the disappearance of specie from general circulation soon followed the advent of depreciated paper and that, when Massachusetts retired its paper money and forbade the acceptance of that of its neighbors, specie returned to general circulation and the resulting greater stability of the currency proved a decided stimulus to the colony's trade and enabled it to divert trade from Rhode Island where paper was still used.

Because of the widespread evils and abuses that arose from these paper-money issues and, more especially, because of the resulting losses to British creditors, England finally resorted to more determined measures to put an end to them. After the private bank issues had been made illegal in 1741, the next move was taken in 1751 by an Act of Parliament which forbade the four New England colonies to issue any bills of credit in the future and declared that thereafter no bills of credit should be made legal tender. Exceptions to the general prohibition allowed issues of treasury notes to meet current expenses or the emergencies of war, but only provided they were accompanied by adequate safeguards to ensure prompt retirement. All outstanding issues were required to be called at the date of their maturity which could not be postponed.

Finally, in 1764 Parliament extended this prohibition to the rest of the colonies but without providing for the exceptions. This action aroused widespread antagonism among the colonists, particularly in the groups that stood to benefit by cheap money. In spite of the fact that, in the absence of any general willingness among the colonists to place an effective check upon excessive issues, such a prohibition was fundamentally sound the colonists looked upon it as a great hardship and an infringement

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of their rights. It must be admitted that the act of 1764 was unfortunately timed. Coming after the close of a war during which inflationary influences had been very marked and just when a business depression was setting in, it increased the difficulties of the next few years and accentuated the hostility toward England. Probably the number of colonists who felt that they were injured by the prohibition of paper-money issues was larger than in the case of any other essentially economic restriction imposed by Great Britain at this period.

Other Forms of Credit Instruments. In addition to the paper-money issues there were other forms of credit instruments that existed in the colonies and functioned as substitutes for money. Lacking anything like modern commercial banks, borrowing from private individuals was widespread and to a limited extent the promissory notes thus created passed on endorsement from one person to another. Much more widely employed were the treasury bills issued in the form of promissory notes by the provincial treasurers when funds were lacking to meet payments due, though their use was limited by the fact that they were apt to be drawn for considerable sums and in odd amounts, and might bear interest. As trade between the different commercial ports expanded, domestic bills of exchange drawn by one mercantile house upon another came into use. Ordinarily they were based upon a sale of merchandise but sometimes represented the making of a loan.

A particularly useful credit instrument that also served as an important substitute for money was the foreign bill of exchange. This was usually drawn on England by those who were exporting goods to that country; for payment they drew against the person or firm to whom the goods had been sent. It was also used at times as a means for borrowing from England, the colonist by previous arrangement being allowed to draw such bills against some Englishmen who thus gave him credit and the colonist at some later date repaying the amount so borrowed. These bills were bought by people who had imported goods from England or for other reasons had debts due in England, and were sent to the creditors in England who then collected the money from the people against whom the bills had been drawn. Another means for obtaining English funds was provided by the bills drawn on the British treasury in payment for expenditures in the colonies incurred by that government. In this way the risks and greater expense involved in the actual shipment of specie were avoided.

As it was the Southern colonies, particularly the tobacco colonies, that sent most of the exports to England and as their imports from England, according to the official figures, were commonly less in value than those exports, the supply of bills on England in that section was greater than the demand. In the other colonies the situation was reversed.

Hence it was frequently customary for such colonies as Maryland and Virginia to sell their surplus supply of bills on England to the colonists in the North, who then used them to meet their debts in England. In a similar way the merchants of the Northern colonies trading to the West Indies or southern Europe, where the balance of trade was favorable, often accepted bills on London instead of specie in exchange for their goods and used these to pay for their heavy imports from England. In such ways the growth in the use of this economical credit instrument in the place of money was a distinct gain in facilitating both colonial and international trade. It need scarcely be pointed out that its successful use depended on business honesty and adequate laws to protect the bill-holders in case they were not paid when the bill came due.

The Economic Efficiency of Colonial Currency. From the foregoing description of colonial currency it will be clear that the colonies had to deal in a circulating medium that was anything but satisfactory and efficient. The difficulties under which they labored where barter was in vogue or commodities were used as money have already been suggested. When specie or paper money was available, only some of these difficulties were eliminated. The innumerable varieties of foreign specie had to be reckoned in terms of the money of account, pounds, shillings, and pence; where laws fixed the ratio at which such coins were to be accepted, they varied from time to time as well as from colony to colony. If the specie had been clipped too much, as was often the case, it had to be weighed and the value figured accordingly. In the case of the paper money the various issues were even more numerous and confusing. Their value was always uncertain; they might be redeemed at par and they might not; when not legal tender some people would be willing to accept them and others refuse; if one kept them for a while they might be worth less; they also might be worth more, though such was less apt to be the case. If one went into a shop to buy a pair of shoes and inquired the price, he would be asked whether he intended to pay in hard money (that is, specie), barter, credit, or paper money and the price would vary accordingly. If a man loaned money or gave credit, he could seldom be certain whether the sum eventually paid back would have the same value as that loaned; if he borrowed money, he faced similar uncertainties. The mere awkwardness and waste of time involved were the least of the evils. The uncertainties and needless financial risks thus created affected a vast volume of business transactions; debtors or creditors suffered, trade was hindered, credit impaired, the free flow of capital obstructed, and widespread unjust losses and undeserved gains resulted.

CHAPTER X

THE GOVERNMENT AND ECONOMIC LIFE

Introduction. Our attention thus far has been centered upon the more purely economic activities and development of the colonies. It was pointed out at the start that an understanding of the economic life of any people involves some consideration of the interaction between the economic conditions and the political, religious, and other social conditions, partly because those other conditions exercise an influence in shaping the economic life and partly because the economic life in turn reacts upon and helps to shape the character of the other phases of social development. Of especial importance among these other phases of social life from the point of view of their influence on economic life are the political institutions, which we may summarize under the term of "the state."

In fact the state plays a part in our economic life in so many and in such direct ways that it might well be considered an economic as well as a political institution. It functions in a positive way by itself providing many of the economic goods and services that society wants as well as in what may be called a negative way through the regulation and control of innumerable lines of economic activity. Without the state, the economic life of modern society would be impossible. We have previously, as occasion arose, pointed out numerous illustrations of the interaction between the economic and the other phases of social life; in this chapter we can touch only briefly on a few of the most important of these interactions, chiefly those concerned with political institutions, for the subject is as broad and complex as all social life.

The outstanding feature in the development of the political institutions in the colonies was the relatively high degree of local autonomy and self-government that was attained. This was the result of many interacting causes—economic, political, psychological, geographic, and social. In the first place England never exercised extensive control over the colonies. The distance from England and the extremely slow and uncertain means of communication made supervision of the innumerable details of government impossible. The colonies were largely the product of private enterprise and individual initiative, only mildly encouraged rather than actively developed by the government in England; in the seventeenth century they were looked upon as unimportant outposts of the rising empire; in the following century, under the policy of "salutary

neglect" which prevailed until 1764, they were rapidly developing a vigorous political life of their own.

Except for three proprietary colonies, Pennsylvania, Delaware, and Maryland, and the corporate colonies of New England¹ all became crown colonies where royal governors were installed to uphold the authority of England; but the governors, being dependent upon the colonial assemblies for financial support and ineffectively backed by England, fought a losing fight against the rising powers of the provincial assemblies. Furthermore, the essentially local or provincial economy that prevailed made it necessary that political institutions be largely concerned with local affairs and under control of those in close contact with local conditions, while at the same time it minimized the need for governmental action that was more than local or provincial in scope. Finally, there was the psychology of the colonists: the spirit of democracy and independence, of liberty and individualism, which was destined to prove the fundamental cause of the Revolution. Most of those who came to the colonies sought greater economic, political, and religious freedom; the religious views most generally prevalent were a protest against authority; the frontier environment furthered the development of a democratic, individualistically inclined society; and necessity forced the colonies to create their own political institutions which, reflecting the spirit of the people, provided a much greater degree of self-government than was enjoyed by the people of England.

Franchise Rights. The cornerstone of a democratic, representative government is freedom and equality in enjoyment of the right to vote. The democracy of the colonists fell far short of the point where this privilege was extended to all. In the first place, women were not even thought of as entitled to franchise rights, and of course the slaves had no such privilege. In the case of the free males some property qualification was almost universal and usually took the form of a freehold ownership of land, ordinarily at least 25 or 50 acres, or possession of other property worth £40 or £50. At first, when land was easily obtainable, this requirement did not disfranchise many; toward the end of the colonial period, as land in or about the towns rose in value and a larger group of artisans, mechanics, and common laborers developed, an increasing number found themselves deprived of the vote, and those in power showed a marked unwillingness to extend this right. Religious restrictions were also common, as was to be expected in a period when Church and state were closely connected and religious toleration was far from attainment, even among a people who had sought to escape from the intolerance and persecution that prevailed in Europe. Catholics and adherents of non-

¹ Massachusetts had a royal governor appointed by the crown after the revision of its charter in 1691.

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Christian sects were generally disfranchised and in some colonies the Quakers; in the New England colonies outside of Rhode Island membership in the Congregational Church was required in the earlier period, though modified later in favor of good moral standing in the community.

Equality of Representation. Real democracy in a representative government involves not only equal franchise rights but equality of representation in the governing bodies. The failure to provide for this as the settlements expanded furnished the colonists a basis for the complaint that the provincial governments, even in matters largely under their own control and not subject to England, were not truly representative and democratic in character. In all the colonies, as soon as the settlements attained appreciable size and began to spread out so that it was impossible for the whole group to assemble in a general meeting, a representative form of government was set up to control the general affairs of the colony; local matters were delegated to the towns, parishes, or counties, according as the density of settlement made one or another the best unit for local government.

The first representative assembly was established in Virginia in 1619 under the company charter; Massachusetts Bay established hers in 1634. In Rhode Island and Connecticut assemblies were established by common consent and social compact, later confirmed by royal charters; elsewhere the proprietors or the crown granted these rights. Above the assemblies were the governors and, except in Pennsylvania, Delaware, and Georgia, the small second body known as a council. After 1691 Rhode Island and Connecticut alone chose their own governors; elsewhere this official was appointed by the crown or the proprietor. The governor appointed the council, except in Massachusetts, called and adjourned the assembly, had a veto over its acts, appointed many officials, and had general oversight of the enforcement of the laws. Over against the large powers of the governor and the council the power of the assembly was found in practice to rest chiefly on its control over the sources of revenue necessary to defray provincial expenses, including the salaries of the governor and most of the royal officials. In the constant struggle between the opposing interests of the colonists and the crown or proprietors, which marked colonial history, this control of colonial revenues proved one of the strongest factors enabling the colonists to protect themselves.

Although the original distribution of members in the colonial assemblies provided a fairly equal representation for the voters in the different units of local government, it was found that, as population spread into the interior and as new villages or settlements sprang into existence, there developed among those then in control of provincial affairs and

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representing the older settlements a decided unwillingness to create new towns, parishes, or counties and to give them a representation in the assemblies proportionate to their growing population. In a rapidly expanding country where representative forms of government prevail, this tendency among those once established in political control to retain that control so as to protect their economic or other interests, with little regard to the interests of the unrepresented groups, is always a serious problem and tends to create friction, social and political unrest, and even rebellion, all of which were well illustrated in the colonies.

It was mainly in the eighteenth century with the great influx of settlers into the interior and upland sections of the colonies, particularly from Pennsylvania to the Carolinas, that this problem came to the front. In southeastern Pennsylvania the older counties controlled the assembly and, led by the dominant Quaker aristocracy, steadily refused to grant the newer settlements of the interior representation in proportion to their population; much the same attitude was assumed toward the growing artisan and mechanic classes in the city of Philadelphia. The western settlers constantly complained that the assembly failed to act on matters that were essential to their economic development. Similarly in the Southern colonies, the Scotch-Irish, Germans, and Quakers who poured into the upland section created a group that*in racial stock, religious views, and methods of agriculture was radically different from the plantation owners of the tidewater region; the latter retained in their own hands the majority control which the existing distribution of representation in the assemblies had given them. The economic interests of the upland settlements in such matters as the land laws, protection against the Indians, taxation, roads, and monetary affairs were inadequately represented and finally led to open revolt in the Carolinas in 1769, and Bacon's Rebellion in Virginia in 1676 was an early case of somewhat similar oppression. It was partly to escape this evil that some of the settlers of North Carolina began to move over the Alleghenies just before the Revolution.

Although some of the legislation against which these frontier settlers protested was partly due to the influence of the proprietors or the crown, it may well be questioned whether this group did not suffer more from the dominant power of the coastal sections than from the English government. Certainly the desire of the back-country districts to secure a more democratic and equal basis of representation in the provincial government played an important part in the social and political ferment that finally broke forth in the Revolution.

The Government and Economic Activities. The political institutions of the colonies that were most important in relation to their economic life were the different forms of local government such as town, parish, or

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county and, above that, the provincial government which determined the powers granted to and exercised by the local governments.

The unit of local government varied considerably in the different groups of colonies and was largely influenced by the character of settlements. Generally speaking, it may be said that in New England the town was the unit and the county was less important; in the Southern colonies, where population was scattered, the county was the important unit and the basis of representation in the assembly and the smaller unit, generally called the "parish," was chiefly concerned with the support and management of the church and the poor. In the middle colonies both town and county performed numerous functions though the latter was more important and the usual basis for representation in the assembly.

The New England town was the most democratic and representative among the units of local government that developed in the colonies and it performed more functions and exercised more control in the affairs of the community than was attempted in the other colonies; in no small part it was a product of the fact that the form of settlement in groups afforded greater opportunities for united action and also created a greater need for social control. The town through the town meeting levied taxes, established and supported the schools and the church, provided for the care of the poor, looked after the roads, managed the common lands, subject to the rights of the proprietors, elected the chief town officers and the representative in the provincial assembly, and carefully looked after the peace, order, moral conduct, and general welfare of the community.

The use of the common pasture, meadow, and woodlands, the care of livestock, and the upkeep of the fences involved many detailed regulations. The town cow keeper and hogreeve looked after such livestock as was gathered together each day and driven to the fields and the town fence viewer saw that the inhabitants kept their fences in good order so that the livestock would not damage crops. The mere list of some of the officials found in the different towns will have to suffice to suggest the numerous functions that were undertaken by these small but active communities. There were water bailiffs, constables, tithingmen, pound keepers, bellmen, sealers of weights and measures, cullers of staves, measurers of corn and boards, corders of wood, overseers of chimneys and chimney sweepers, surveyors of casks of tar, and numerous others, besides the more important town officials such as selectmen, treasurer, clerk, and recorder. On the other hand the functions performed by the county in New England were far less numerous. It was chiefly significant as a judicial district; in Massachusetts it also was a higher military unit, levied a county tax for the support of the courts, jails, highways, and bridges, and equalized taxes.

In the middle colonies the county eventually became the more important unit of local government and chose the representatives sent to the assembly. It was the chief judicial unit, had general charge of the construction and maintenance of roads, bridges, and county buildings, appointed many local officers such as the viewers of pipe staves, bread, meat, and fences, and levied and collected taxes. While in New York many of the more important county officials were appointed, in Pennsylvania they were generally elected by the people. For smaller units of local government the middle colonies had the manor, chiefly developed in New York and Maryland, and the town. Their functions varied considerably but were concerned principally with such matters as care of the poor, purely local improvements, regulation of local trade, and a few tax levies for these purposes. Nowhere were they so numerous or important as in the New England towns.

In the Southern colonies the large plantations and scattered population left little need for such a small unit of government as the township and the unit most closely corresponding to it, known as the "parish," was, except in tidewater South Carolina, almost entirely confined in its activities to the support of the poor and the Anglican Church which, during the eighteenth century, was the established church in all these colonies. In consequence the county carried on such activities and exercised such control as was deemed necessary in the way of local government. The county was the unit for judicial administration; the county court in Virginia had charge of bridges and highways, licensed and regulated the charges of ordinaries and ferries, appointed the tobacco viewers, was the unit of the militia organization, and levied and collected the county taxes. It was generally the county that chose through popular election the representatives sent to the assembly; but, since the most important county officers were appointed by the governor, local government in the South was distinctly less representative and democratic in character than in the North. Generally speaking, too, the county of the South was a less active factor in either aiding or controlling the economic development of the country than the local government units of the Northern colonies.

Above the units of local government were the assembly and the governor and his council, who in turn were more or less subject to the proprietor or Parliament and the crown. Though the assemblies, notably in the earlier period before local government was developed and in the Southern colonies continuing to the end, exercised a considerable degree of control over local affairs, they were chiefly concerned with matters of general interest and importance. These included questions affecting the general economic progress of the colony: the circulating medium, the control of foreign trade, the disposition of the land, roads, the control

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of indentured servants or slaves, the courts, military defense, the church where it was established, education where supported by the state, and taxation. Since most of such measures as chiefly affected the economic life of the colonies have been previously described, it is only necessary here to suggest the general extent of the activities of government in the economic life of the colonies.

On the positive side of those activities that took the form of government aid, the explanation for such action is found in part in the lack of wealth, the difficulties incident to establishing settlements in a new, undeveloped country surrounded by hostile savages, and the need for united action. On the negative side of state action, that concerned with regulation and control, the measures were far more numerous. Only a few of the more important have been described and nothing has been said concerning the elaborate code that went to make up the seventeenth-century blue laws of the Puritan colonists attempting to regulate the clothing that they wore, their amusements and use of their leisure hours, their reading, their education, their moral conduct, and innumerable other matters in the routine of daily life. Such regulation and paternalism on the part of the state are to be understood in part as a product of the intense religious zeal and seriousness of moral purpose that prevailed in some of the colonies and the close relationship between church and state. In part, especially in those matters directly regulating economic activities, it was due to the character of the environment and general economic organization where a local economy prevailed, labor and capital were scarce, and competition weak; and in this field it had behind it the example and habit of long-established practices in England.

Because some of these blue laws and other regulations appear to us as rather unusual if not obnoxious and have therefore attracted much attention, there has developed a greatly exaggerated notion of the extent to which government regulated the daily life of the people. As a matter of fact such activities on the part of the state, both in the form of providing for economic wants and in that of regulating the economic life, were far less extensive than they are today. There was then less need for regulation, since the whole social organization was such that the actions of any individual had far less effect on others than today. In a way there was more need for the government to provide for certain economic wants, since private initiative, owing to the lack of wealth and the difficulties of cooperation, was less able to do so than today; it was unable to do much, partly because it lacked the means and partly because there was so little general recognition of the need for such action.

The Fiscal Systems of the Colonies. Public expenditures and the methods of raising revenue constitute an important phase of the relations between the state and industry. The need for revenue is determined by

the expenditures involved through the activities of the state, and these activities we have seen may take the form of regulation and control or positive action in supplying such goods and services as it is thought best to secure through state action. Under what circumstances and to what extent it is wise for the state to step in and endeavor to take the place of private initiative in supplying the wants of society will depend upon the existing circumstances; even then there will be great differences of opinion. The colonists chose to follow the system they had been accustomed to in the Old World and to rely on private initiative for supplying most of their wants, except in the case of the temporary semipartnership agreements under which the first settlements at Jamestown and Plymouth were established. This individualistic character has been one of the most fundamental features of the economic organization of the country ever since.

There are some goods and services absolutely essential to society which, by their very nature, cannot be adequately supplied by private initiative, such as the maintenance of law and order and defense against attacks from outside. That the state should establish and support a church was common practice in Europe in colonial times and is still the custom in many countries. The fact that this was not done in all the colonies marks one of the most significant departures from Old World tradition, for it was a great step toward religious freedom. Another departure, marking in its ultimate development a still more significant contribution to modern social life, may be considered the practical beginning of state support of education. The care of the poor was largely assumed by the state, for few philanthropic organizations were found in the colonies and public hospitals were unknown till near the end of the period. The construction and maintenance of roads and bridges were important activities of the state, which also maintained a limited postal and lighthouse service. Beyond these more essential needs the state attempted comparatively little in supplying the wants of society, though in numerous ways it extended aid to private initiative in the effort to secure needed goods and services.

Some idea of the relative importance of these activities can be gained from a comparison of the sums spent for different purposes, though in the absence of adequate statistics we can only draw general inferences as to the amounts involved. In nearly all the colonies the heaviest expenditures arose in connection with wars and the need for defense. It was because such expenses were so large and so concentrated in short periods that the ordinary revenues were inadequate and the colonies frequently resorted to paper money to meet the needs of the situation. It was chiefly as a result of these expenditures for military purposes that the colonies got into debt, for ordinary expenditures connected with colonial government

were generally covered by the imposition of such taxes as were necessary to meet the outlay. Aside from the salaries and expenses of the provincial and local officials the chief items were the outlay for roads, bridges, public buildings, care of the poor, and support of the churches and schools. How meager the provincial activities must have been can be inferred from the fact that the civil establishment in most colonies just before the Revolution was reported to cost between £2,000 and £8,000 a year.

The Sources of Revenue. The general opposition to taxation, particularly those taxes imposed directly on the individual, was especially strong in the colonies. This was due, partly to the lack of large accumulated wealth and partly to the fact that in the case of the scattered inland and frontier settlements it was difficult for the people to see that the state was doing very much for them; in truth, their interests often were neglected. This hatred of taxation, no matter by whom imposed, was a factor in the discontent that led to the Revolution. The most important direct taxes used in the colonies were the poll tax, generally imposed equally on all males above a certain age, the faculty tax, and the general property tax. The faculty tax was one imposed on laborers, artisans, and tradesmen, and rather roughly proportioned to the supposed earnings of the different groups; thus it had some resemblance to an income tax.

The general property tax was supposed to be levied on each person according to the amount of wealth that he possessed. It should be noted that in those days it was much easier to make a fair estimate of an individual's wealth than it is today, partly because in the small communities of that time each person's affairs were much better known, and partly because an individual's wealth was largely in the form of tangible goods that could not easily be concealed; today so much of it takes intangible forms such as mortgages, bonds, and stocks the possession of which can be readily concealed that it is apt to escape taxation and hence result in great inequalities in the general property tax levy. In some instances these taxes were made up in part of a levy for town or parish purposes, partly of a levy for the county, and partly of a levy for the general purposes of the colony. In New England the general property tax and the poll tax were commonly used; in the Southern colonies much more dependence was placed upon indirect taxes, though both poll and property taxes, particularly the former, were sometimes employed; the system adopted in the middle colonies lay between the two. Most of the revenue required for the purposes of local government came from the direct taxes, but such taxes were a less important item in the receipts of the provincial governments, especially in the trading colonies.

Among the indirect taxes the duties levied on imports or exports were relied upon as an important source of revenue in those colonies extensively engaged in trade. Although all the colonies imposed such duties at one

time or another, they were most important in Massachusetts, New York, Maryland, Virginia, and South Carolina, and to a less degree in Pennsylvania. Though these duties often had other purposes in view, they were imposed primarily for the sake of revenue and fell most heavily on such commodities as wines, liquors, tobacco, sugar, molasses, tea, cocoa, dye woods, and slaves. The only export duties yielding an appreciable return were those on tobacco imposed by Maryland and Virginia, where they were one of the chief sources of provincial revenue. Tonnage duties were in force nearly everywhere and the revenue obtained, though never large, was employed for purposes of defense or maintenance of the lighthouse service. Among the internal revenue taxes those on wines and liquors and their sale were the most common. Fees for a great variety of services, where the benefit went chiefly to the individual paying the fee, were everywhere a minor source of revenue. Commonly the quitrents payable to the crown were available to meet designated provincial expenses; in the eighteenth century, lotteries were often authorized to raise funds for public purposes.

The general property taxes in the colonies were not progressive; that is they did not impose a higher rate on those possessing large amounts of property; the same rate was imposed on all, regardless of their wealth. Except for such taxes on luxuries as those on wines, liquors, and slaves or the faculty taxes, no special attempt was made to adjust the system so as to obtain from the rich a levy more nearly proportional to their ability to bear it. As a whole, therefore, the system tended to fall with relatively greater weight on the less well-to-do. This was doubtless chiefly due to the fact that the accumulation of such large fortunes as developed among the great landowners or merchant traders was mainly a development of the later period; even then the inequalities in the distribution of wealth were far less marked than is the case today. It should be added, however, that in this later period the wealthier classes came to exercise more influence in the colonies and they naturally opposed any taxes particularly directed against themselves.

Summary of the Economic Development of the Colonies. Having completed our survey of the various phases of the economic development of the colonies, we can now look back over that history as a whole, attempt to summarize the results, and ask the question: To what extent and by what means had the colonies made progress in the effort to supply their economic wants?

In the first place, the difficulties incident to establishing the colonies and tiding them over the period till they were self-supporting had been borne partly by the capital and enterprise advanced from Europe, much of which received little or no return, and partly by the capital and the

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labor, with its attendant sufferings and death toll, of those who migrated to America. Once established, the colonies gained in productive capacity through the steady increase in the available supplies of the different agents of production.

In the case of natural resources this was obtained partly through the opening up and settlement of the country by the colonists, partly through the gaining of a better knowledge of the resources and climatic conditions of the region and thus of what kinds of commodities could be produced and which were likely to prove most profitable by way of trade. Through the rapid natural increase of the population, immigration, and the acquisition of servants and slaves, the supply of labor was greatly increased; more slowly, partly through the inflow of capital but chiefly through its accumulation out of the growing savable fund resulting from increased efficiency, the supply of capital was increased. Thus the available quantity of these two agents of production was augmented. In addition there was some progress in obtaining new knowledge of processes and inventions for making better use of these resources; and through greater experience those engaged in the direction and control of economic activities learned more efficient methods of organization. In these ways economic progress would have been assured even though each family or little settlement had been content to remain almost exclusively occupied in producing only such things as were needed for supplying its own wants. This, in fact, continued to be the case with a very considerable portion of the people even at the end of the colonial period.

Throughout the period this household, or essentially local, economy was being slowly altered, and one of the most important factors in the economic progress of the colonies is found to be in the growing specialization and division of labor made possible by the widening of the market and the various developments contributing to that result. Among these developments were the improvements made in inland transportation and communication that helped to break down the local economy of the different settlements in each colony. However, these improvements were so inadequate that, in the interior region, only a small beginning had been made even at the end of the colonial period. Far more important in contributing to colonial progress was the growth of the coastwise and ocean trade, particularly the latter, and the merchant marine in which it was carried. This meant a great step forward in the division of labor as between the colonies and other parts of the world; it enabled the sections of the colonies taking part in it to specialize in those products in which they had the greatest relative advantage and exchange them for products of other regions which they themselves could not have produced at all or only at a greater cost. The limited extent to which the resources of the country were developed and the lack of variety in the commodities pro-

duced greatly increased the importance of foreign trade as a factor in the economic development of the colonies.

Since specialization involves exchange of goods or trade, it is in part dependent upon and furthered by improvements in all the methods and institutions by which trade is facilitated as well as by improvements in transportation. In this field of economic activity also the colonies had been making progress: marketing methods were improved; wholesaling was beginning to be separated from retailing; somewhat better means for communication and the spread of market information were made available; warehouses were growing; insurance against marine risks was obtainable; the introduction of money, though of an unstable character, along with such credit instruments as bills of exchange, was helping to overcome the difficulties of barter; the better systematization of the laws relating to business activities lessened uncertainties and facilitated the settlement of disputes; and the growing power of the state in numerous ways afforded greater stability and aid to economic enterprise.

Over against this brief summary of the ways and means through which the colonies had made progress in the problem of satisfying their economic wants it is desirable to point out the chief obstacles that stood in the way of still greater success. Some of these obstacles—much the most important in fact—were due to conditions over which the colonists themselves had little or no control; others were of a character such that the colonists might have done much to lessen or remove them. Foremost among the former group was the limited use of the resources and forces of nature due to the backward state of science and invention in the world of that time. The scarcity of labor, particularly the skilled type, and the lack of capital were difficulties of the same class though not without advantageous effects on the economic condition of free laborers. All the conditions that limited specialization, division of labor, and trade, and that tended to make the economic organization of most sections an essentially local or provincial economy stood in the way of progress; at the same time they checked the growth of a larger political unity which might have helped to overcome some of these obstacles. The monetary system of the colonies was chaotic and a constantly disturbing factor in business; such an institution as a banking system practically did not exist and, outside of marine losses, there was practically no system for insurance against risks. Finally, the economic disturbances and losses arising from frequent wars either with the Indians or with other nations took a toll in wealth as well as in life. Such were some of the chief obstacles to economic progress that the people of the colonial period left to those of the succeeding generations to try to overcome. By what means and with what success they met these problems the following chapters endeavor to explain.

PART II

THE PERIOD OF WARS AND ECONOMIC TRANSITION 1764-1815

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CHAPTER XI

ECONOMIC CONDITIONS, 1764-1775, AND THE CAUSES OF THE REVOLUTION

The General Character of the Period of Transition. Before we take up the specific topic of this chapter, it is essential to explain something of the general character of the period extending from shortly before the outbreak of the Revolution to the end of the War of 1812, to which we now turn. This period is an unusually complicated one necessitating a method of treatment in some respects different from that used in describing the course of events in most other periods. Also, an understanding of the general character and significance of the period in its relation to the rest of our economic development is essential to an appreciation of the meaning and relative importance of the detailed facts and movements that are to be described.

Perhaps the period can best be understood and interpreted as one in which two distinct sets of forces dominated the course of events in our economic life. One set of forces is found in the wars, domestic and foreign, that were being waged during all but a few of the years embraced within the period, together with the political and other changes incident thereto that reacted on our economic life. These were the forces that introduced what we may call an abnormal element into the situation—if we may assume that war is abnormal—for the wars reacted powerfully on the course of our economic life; in some instances they created tendencies diverse from those that prevailed when the country and the world were at peace, and in other instances they abnormally hastened movements in line with what was destined to prove the more normal trend of economic development. The second group of forces that we shall investigate may be grouped together as those developments, not primarily due to the wars and more in line with the normal course of economic development, incident to the introduction of a more economical organization of industrial society and the slow transition from the colonial economy to the

more nearly national economy of the succeeding period. Underlying all the turmoil of wars and their aftermaths, often lost from sight in the quickly changing and spectacular course of events that for the moment dominated attention in the arena of economic and political life, these less obvious but generally more enduring and important changes were slowly helping, now here and now there, to transform the organization of industrial society inherited from the colonial period.

Were our objectives in this study concerned solely with the evolution of our economic order, we might omit in the chapters devoted to this period most of the details dealing with the temporary course of economic events arising out of the abnormal conditions engendered by wars. Our objectives are broader than that in scope; we are interested in all the important lessons that can be drawn from our past that may be applicable to present or future problems in our economic life, and the wartime experience of this period taught many a lesson of value for the World War, though some of those lessons, it would appear, had been only half-learned or not learned at all. We are also interested in the interaction between economic conditions and other phases of our social history, and this period, which includes the winning of political independence and the establishment of a new form of government, is of especial significance in that connection. Finally, it will also be found that even the abnormal conditions arising out of the wars sometimes wrought changes of a comparatively enduring and permanent character, even where originally it was sought only to meet an immediate and temporary need. Some of these changes eventually became a part of the more normal industrial structure that shaped the country's peacetime growth; some survived long after they had ceased to perform a useful function, as examples of the inertia of social institutions which history so constantly illustrates and which, although giving stability to the social order, too often becomes an obstacle to progress.

The abnormal conditions that mark this period as a whole exercised such great influence on the immediate course of events and varied so from time to time it is necessary to divide the period into sections corresponding to the changes in general conditions and so make the account more nearly a chronological narrative than for other periods; only thus can the rapid changes and extensive interaction of the various developments be explained. Along with this narrative of wartime reactions and their aftermath, often closely influenced by them, will be found developments tending to bring enduring changes in the structure of industrial society. To make sure that the significance of the latter is not lost sight of in the kaleidoscopic rush of events, those results will be summarized later. The difficulties in judging the significance of these changes and interpreting the period as a whole will be materially lessened if the two groups of forces

that dominated it are kept clearly in mind, confused as their interaction is: (1) the abnormal conditions incident to war and its aftermath; (2) the slower evolution of industrial society particularly marked by the stage of transition from the colonial to the beginning of a national economy.

Economic Events Leading to the Revolution. In the account of the colonial period little was said about the course of events in the economic life of the colonies during the decade that preceded the Revolution, although these events played an important part in bringing on that revolt. The problem of analyzing the causes that underlie any such social movement and of estimating the relative importance of any one group of forces is an extremely difficult task, for the forces involved are manifold and almost inextricably interwoven with one another. Furthermore, even if the proximate or immediate causes are clear, there still remains the question as to the deeper underlying forces, the causes of the causes; when these are traced back, they soon spread out into all phases of social life. Although no detailed analysis can be attempted here, it is worth while to try to suggest some of the most important factors in the situation, partly because they so well illustrate the interaction of economic and other social forces and the complexity of causal relationships in history, partly because of the fundamental importance of the Revolution in our history.

The Situation at the Close of the Seven Years' War. Previous to 1764 England had made no attempt to tax the colonies directly but had sought rather to regulate trade and commerce. Although this regulation had caused occasional protests on the part of the colonists and was often evaded, the general principle had been accepted as being in part justified by the burden of defense of the colonies, which was largely assumed by England. But the end of the Seven Years' War in 1763 brought important changes in the situation. France was swept from the North American continent and the danger of French aggression from the north or the west, which had been a constant menace to the English colonies, was removed. The need of English protection, which from the first had been one of the chief influences reconciling the colonists to their control, was thus no longer so important. At the same time England emerged from the war burdened with a vastly increased debt and great additions to her colonial empire, which only made the burden of its administration and defense the greater. England began to feel that this burden was too heavy for the people of England alone and that the American colonies, now prosperous and rapidly developing, ought to share at least a portion of the increased outlay for their defense. Furthermore, in 1760 George III had ascended the throne and, unlike his predecessors of the Hanoverian line, he was resolved to rule and soon succeeded in gathering about

him a group of councilors who joined him in a determined effort to assert more vigorously the dwindling prerogatives of the crown. These circumstances led to various measures designed to augment the royal revenues, tighten up the commercial ties that bound the empire together, and generally increase the control of king and Parliament over the widely spreading dominions.

The problem faced by the British Empire in 1764 was in many respects not unlike that which it faced after the first World War—the problem of how to meet the conflicting interests of many and varied peoples, distribute the burden of common defense in an equitable way, and knit the fabric of empire together into a unit that would be strong both economically and politically. But in the twentieth century the attitude of the mother country and at least the self-governing dominions in trying to work out the problem was very different from that which prevailed after 1764. At that time, on the one hand, the American colonies showed little loyalty to the mother country or interest in the Empire. In fact, until then they had shown but slight interest in one another and such spirit of patriotism as existed was generally limited to each separate colony. On the other hand, the king and Parliament gave scant consideration to the spirit and interests of the colonies and stubbornly insisted on upholding their prerogatives. Under such circumstances England adopted a policy followed by a series of acts diametrically opposed to the whole trend of development in colonial institutions and so repugnant to the spirit of the colonists that revolt seemed preferable to submission.

British Restrictions and Taxation. The first act of England to arouse opposition in the colonies was the royal Proclamation of 1763 which forbade grants of land and settlement in the region west of the ridge of the Allegheny Mountains. The people of the middle and Southern colonies, who through hunting and trading expeditions were beginning to realize the resources of this region and were becoming interested in the possibilities of their development, felt that England was trying to restrict the spread of settlements so as to keep them under more effective regulation. In fact, although one objective was to secure better control of the colonists by keeping them east of the mountains, the chief purpose was to quiet the Indians, gradually acquire titles to their land, and then open up the section to settlement under orderly management; this is shown by the plans England was about to put into effect just as the Revolution broke out. By that time, too, Boone and others were establishing small settlements in Kentucky and western Pennsylvania so that the Proclamation, although doubtless checking speculative activities, did not appreciably restrain settlers.

It was the acquisition of this western land, including Canada, and the necessity for control of the Indians that furnished a reason for England's

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decision to keep a standing army of 10,000 men in the colonies. The outlay which the maintenance of this army and other provisions for defense of the American colonies involved was estimated at £200,000 to £300,000 annually and most of it was spent in the colonies on the mainland. To help defray this expense it was decided that the colonies must be taxed and, in the enactments that followed, regulation of commerce, which had been the main objective theretofore, became subordinate to desire for revenue. In part this expense was met by the Quartering Act which required the different colonies to furnish barracks for the troops stationed in each, certain utensils, vinegar, salt, and rum or beer. This burden was especially felt in New York where headquarters was established and a considerable body of the troops was maintained. There followed the Sugar Act of 1764 which reduced the prohibitive duty of 6*d.* a gallon on foreign molasses to 3*d.* and included measures to enforce its collection, since the old duty levied by the Molasses Act of 1733 had been generally evaded. This provision the New England manufacturers of rum insisted would ruin them, though the importation of foreign rum was prohibited. The act also imposed heavy duties on wines (for the benefit of English wine merchants), from the Madeiras and Azores not imported through England, and light duties on indigo (to protect the South Carolina product), coffee, wines, silks, and a few other goods; it added various products to the old list of enumerated commodities including several West Indian products, whale oil, furs, iron, hides, skins, raw silk, potash and pearlsh, and reduced the drawbacks allowed in England on goods reexported to the colonies.

At the same time vigorous measures for enforcing the act were put into operation through the use of the navy and admiralty courts, which soon led to friction and acts of violence that caused much popular discontent. Altogether it was calculated that this act would yield about £25,000 annual revenue from the duties collected in America, three-quarters coming from the duties on molasses and wines, and £20,000 from the decreased remission of drawbacks in England though this last did not go directly into the fund to meet the cost of colonial defense. As this sum was only a small part of the cost of the American army, additional revenue was sought by the passage of the Stamp Act in 1765. This act required that stamps of varying amounts be affixed to a long list of papers such as legal documents, newspapers, pamphlets, and ships' papers, and provided that without these stamps legal documents were invalid. The requirement that the stamps be paid for in specie was especially vexatious. These taxes were similar to those then in effect in England, though the rates were generally lower; it was expected the act would yield between £60,000 and £100,000 of revenue, possibly half coming from the West Indies. To understand the outburst of opposition

that followed these measures in the colonies, apparently much to the surprise of king and Parliament, it is necessary to turn to the other conditions that aggravated the situation.

Important among these was the economic depression from which the colonies had been suffering during the years immediately following the return of peace. A period of business depression is always certain to result in social unrest accompanied by demands for various measures of relief which often break out into political agitation. The part which such conditions have played in social history is as yet inadequately recognized, but we shall find numerous examples of their influence in our own history; this period furnishes one.

As yet the detailed facts of the situation during the period have not been thoroughly studied but enough is known so that some of its causes can be stated. Doubtless the most important of these were the readjustments in business which followed the return of peace in 1763. Such difficulties are always a part of the aftermath of any serious and prolonged war, as is abundantly illustrated in our own history; and we may fairly surmise that they were the most important factor in the situation at this time. To this difficulty were added the heavy burden of debt incurred during the war, much of it in the form of paper money, and the hatred of the increased taxes imposed to retire it. Another factor was the act of 1764 extending to all the colonies the prohibition of issue of bills of credit or paper money, which had been applied to the New England colonies in 1751. In the long run this action would doubtless have benefited the colonies for they had greatly abused the use of paper money; but the contraction of the supply of money through the gradual retirement of the outstanding issues would have been a trying experience at any time and, coming as it did, just when the colonies were going through an economic depression and when some of the new tax laws demanded payments in specie, it greatly aggravated the general discontent by prolonging the depression, increasing the opposition to the taxes, and falling with especial weight on the large debtor classes.

We may now raise the questions: What groups or economic interests were injured by these various acts of England? Who led in the opposition aroused? What were the results? Doubtless all groups except the relatively self-sufficing frontier settlements suffered more or less from the economic depression, though it was chiefly felt in the larger trading centers; and the tobacco planters were particularly hard hit during this decade. Next in importance, judging by the number affected, and closely bound up in its influence with the depression, was the prohibition of paper money which especially affected the debtor classes of the middle and Southern colonies. The prohibition of western land grants directly affected only a small, though rather influential, group interested in land

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speculation. The Stamp Act chiefly concerned lawyers, publishers, and traders, who were an influential group and in a good position to arouse popular opposition. The duties imposed by the Sugar Act hurt the traders, the small group of rum manufacturers, and the consumers of some luxuries; besides they threatened to lower the market prices for exports to the West Indies and check the inflow of specie from that source, thus spreading the losses to other groups. So far as the colonists actually experienced economic losses, it is probable that the general depression and the scarcity of money were by far the most important causes responsible for them, and that the Sugar Act and the Stamp Act were minor factors.

Yet it was these acts, particularly the Stamp Act, the burden of which on the masses could not have been great since the estimated receipts were only between 15 and 20 cents per capita, that aroused the greatest outcry. Had these acts been allowed to remain in force the amount of taxation they imposed would not have been unreasonable and probably would have been felt most by the more well-to-do classes. This perhaps explains why these acts became the center of attack: they immediately hit the groups most prominent and influential in colonial affairs, groups that could most easily organize and make their protests heard. Furthermore, the Sugar Act imposed duties for which, at least in form, there was ample precedent in colonial history; in spirit it marked a radical shift in policy from regulation of trade to taxation. The Stamp Act was obviously an internal tax imposed from without and so contrary to all precedent—an innovation which, if accepted, opened the way to still further exactions on the colonial pocketbooks and greater infringement on their rights. These facts made the Stamp Act the strategic point of attack against which these groups could most easily rally the masses whose suffering and discontent were chiefly caused, though only half understood, by other conditions. The ignorance of the masses about the real causes in the complex operation of economic forces under which they suffer in a period of economic depression and about the proper remedies therefor has been used throughout history in manifold and devious ways to further the purposes of some special groups. Such popular feeling as is then aroused is a dangerous force to invoke, for the leaders may lose their control or be forced to become followers, as ultimately turned out to be the case in this agitation that brought on the Revolution.

The Reaction in the Colonies. While the Sugar Act brought forth vigorous protests from the merchant traders, chiefly those of the North who suffered most under it, the Stamp Act also furnished a grievance for the plantation colonies, which were suffering from hard times as well as the trading colonies; and it was used chiefly to arouse the people to an opposition that led to open violation of the law, destruction of the stamps,

and outbreaks of violence. Most significant of all, it brought the objecting groups in several of the colonies to unite in concerted action for the common cause. This first took the form of a peaceful economic boycott of British manufactures—the nonimportation agreements entered into by the merchants of Massachusetts, Rhode Island, New York, and Pennsylvania in 1765—under which they engaged not to import any goods from Great Britain, to countermand outstanding orders, and not to sell British goods on commission until the Stamp Act was repealed. There followed the organization of numerous groups called “Sons of Liberty” who agreed not to use British goods. In October of that year representatives of nine colonies assembled in New York in the Stamp Congress which protested to the King against the taxation without representation imposed by the Stamp Act, and asked relief from the duties of the Sugar Act. The rapid falling off in British exports which occurred at this time had, in fact, started before the nonimportation movement began and was chiefly due to the general depression, from which the West Indies as well as the colonies on the mainland were suffering. Also, the depression was in no slight measure responsible for the success of the boycott, for many merchants were overstocked with British goods; and even those who were not found but little market for them. In any case British trade would have fallen off and the depression powerfully supplemented the colonists’ measures of protest.

Those measures were effective. Parliament, astounded by the uproar and importuned by the British merchants, who saw their most valuable colonial market vanishing and their colonial debtors unable to pay their debts, repealed the Stamp Act in March, 1766; it still asserted its right, however, to *māke lāws* binding the subject colonies. Soon the Sugar Act was altered. The most important changes reduced the particularly obnoxious duty of 3*d.* a gallon on foreign molasses to 1*d.*, but this was levied on all molasses, thus making it a duty for revenue rather than one to regulate trade for the benefit of the British West Indian sugar planters, and the direct exportation of all commodities to ports of the Continent north of Cape Finisterre was prohibited. Great rejoicing followed in the colonies, not only because of the relief thus afforded, but also because of the growing power that the success of their concerted efforts demonstrated.

The Townshend Acts and the Second Nonimportation Agreement. A change in the ministry in England late in 1766 led to a renewed effort to tax the colonies and enforce their obedience. In 1767 Parliament passed the four so-called Townshend Acts providing for a stricter enforcement of the revenue laws, including an authorization of writs of assistance, suspending the assembly of New York for not having complied with the provision of the Quartering Act, and levying new duties on tea, glass,

lead, painter's colors, and paper imported into the colonies. In fact the duties then levied were less of an economic burden on the colonies than the existing modified duties imposed by the Sugar Act of 1764. The most objectionable was the duty of 3*d.* a pound on tea; but, as the act also provided for a remission of the duty paid when the tea was imported into England, it made it possible, for the time being, actually to reduce the price at which the tea was sold in the colonies. This made it difficult for the smugglers of tea, who were particularly numerous in New York and Pennsylvania, to compete with the legally imported product and it threatened to destroy their trade.

At the same time the provisions of the act for the stricter enforcement of all the revenue laws aroused new protests against the still remaining duties of the legislation of the three preceding years. More serious than the tax burden imposed was the threatened impairment of the power of colonial assemblies by the provision that these customs receipts could be used to pay the salaries of governors, judges, and other officials. Thus the merchant-trading class was led to start a new movement to secure a repeal of these regulations, though their previous experience prompted them to be more cautious in stirring up the people and to try to prevent outbreaks of violence. The Southern colonies were little affected by these laws but, in common with most of the colonies, they were still suffering from the economic depression, the effects of which were accentuated outside of New England by the retirement of the outstanding paper money then in progress; for Parliament had failed to modify its prohibition of further issues of the money, and the difficulties of the heavily indebted planter class led them eventually to join in the activities and protests of the Northern merchants. From these groups came the support and aid needed by the more radical agitators, who were little concerned with reform of the economic regulations but primarily interested in securing a greater degree of self-government by which means some of them doubtless hoped to enjoy more political influence. Such were the groups that now united in a new attempt to induce England to relax her laws through the economic pressure of a second nonimportation movement.

The initial impulse came in the fall of 1767 from a series of New England town meetings led by Boston. The hard times necessitated economy and agreements were made not to purchase various imported goods, to give up wearing deep mourning at funerals, and to encourage domestic manufactures; when some of the women asked to give up tea suggested that it would be more to the point for the men to give up rum, foreign wines, and brandy, the proposition did not seem to appeal to the public. Such action was too ineffective, as was becoming clear in the spring of 1768; and it was decided that better results could be obtained by getting the merchants of the leading ports to unite in a general agreement.

ECONOMIC CONDITIONS, 1764-1775

Boston and New York came to an agreement provided Philadelphia joined, but the merchants there were not then suffering from the general depression and refused to join. Notwithstanding this failure, due to the conflicting economic interests, the Boston merchants decided to proceed independently; and in August, 1768, many joined in an agreement not to send further orders, to discontinue all imports from Great Britain with a few exceptions during the year 1769, and to cease the importation of tea, glass, paper, and painter's colors until the duties on them were removed. Within two weeks the New York merchants had entered upon an agreement much the same in character; some six months later the merchants of Philadelphia agreed upon nonimportation effective after Apr. 1, 1769.

In the South the merchants and factors closely tied up with British interests opposed the movement; but the radicals and the planters, forced to economize to meet their debts, joined in the spring and summer of 1769 in agreements even more comprehensive than those of the North. The rest of the colonies, except New Hampshire, which was unusually prosperous, followed suit; it required the threat of a boycott by the neighboring colonies, however, before the merchants of Newport could be brought into line.

In spite of the fact that many of the nonimportation agreements did not go into effect until considerably after the first of the year, the English customhouse returns for 1769 show a heavy falling off in exports to the colonies for that year as compared with 1768. The loss was confined entirely to the Northern colonies; there was an actual increase in the Southern colonies, the initiative in shipments to those colonies being largely in the hands of British exporters. In New England and Pennsylvania, on the other hand, the imports fell off more than one-half and in New York nearly six-sevenths. The reaction of this trade loss on England was mitigated by other favorable events, but the government deemed it desirable to quiet the rising political discontent in the colonies; besides, it was pointed out that the Townshend duties, with the exception of that on tea, were chiefly on English manufactures and tended to stimulate colonial industries.

Another change in the ministry in 1770 finally gave the king a chance to surround himself with ministers of his own liking with Lord North as prime minister. In the following April the Townshend duties were repealed, except for the duty on tea; that was retained because it was not an English product and, as the king wrote Lord North, "I am clear there must always be one tax to keep up the right." But this determination "to keep up the right," exemplified by the duty on tea, proved fraught with momentous consequences.

Again the colonies had won the reforms specifically demanded in most of the nonimportation agreements except for the repeal of the duty on tea,

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retained for the sake of the principle involved. Should the colonists keep up the nonimportation agreements for the sake of that principle? This was the question that confronted them when news of the repeal of the Townshend duties arrived in May, 1770. The more radical groups, less interested in trade, favored so doing; the Boston merchants also approved the plan as a means of securing the repeal of the duties levied in the earlier acts. But the merchants of New York and Philadelphia could not be induced to join in the proposal. By this time the merchants' stocks of goods were much depleted and prices were rising in spite of attempts to regulate them; the economic losses from a continuation of nonimportation would fall chiefly on them.

Furthermore, in 1769 the British East India Company had raised the price of tea so that the smuggling of tea from Holland was once more profitable and the tea duty made it the more so. Although the stricter enforcement of the customs laws had considerably reduced the amount of smuggling, particularly around Boston, New York and Philadelphia merchants, even some who had signed the nonimportation agreement, were still extensively engaged in illicit importations of tea; it has been estimated that probably nine-tenths of all the tea consumed in the colonies came in without paying a duty. Finally, the falling off in the export trade of the middle colonies after 1768 brought further pressure to bear on the merchants, and an Act of Parliament allowing New York to issue £120,000 of legal tender paper money, news of which arrived in May, 1770, removed another cause of complaint.

Under these conditions New York, led by its more conservative merchants and in spite of opposition from the radical leaders backed by the artisans and mechanics, decided in July, 1770, to abandon nonimportation from England except in the case of tea and dutiable articles. This action led to an outburst of protests against this perfidious abandonment of the common cause from the other colonies where at the moment sentiment was in favor of continuing the general boycott of British goods. When one of the great ports gave in, it was difficult for others to make the sacrifices involved in holding out; so in September Philadelphia, led by the dry goods merchants, followed the example of New York; when news of this reached Boston, similar action was taken there. The Southern colonies, though less affected by nonimportation, saw little reason to continue the policy when their Northern neighbors had abandoned it; and before the year was over goods from England, except the dutiable articles, were being ordered from all the colonies, aided by a generous extension of British credit, in even greater quantities than usual to replace the depleted stocks. Tea and other dutiable goods were obtained through smuggling, through the establishment of new domestic manufactures that received a considerable impetus during this period, or

through the general acquiescence outside of New York and Philadelphia in ignoring the boycott against the dutiable goods of British origin.

There followed two years of comparative political quiet and fairly prosperous business conditions. By this time the worst of the depression incident to the aftermath of the war and the contraction of paper currency was over and there was an unusually heavy demand for grain from southern Europe. The merchants, having seen the dangers to property, law, and order that accompanied the organization and excitement of the masses, were more than ever anxious to let sleeping dogs lie; although the concessions of England had removed many of the causes for previous protest, some still remained. Prof. Channing estimates that the customs revenue which Great Britain collected in the colonies averaged about £30,000 yearly from 1768 to 1774, and cost about £13,000 annually to collect. This was a great increase over the revenue of about £2,000 a year, costing nearly £8,000 to collect, which Great Britain had obtained from the colonies in the years just preceding 1764.

Relatively this was a heavy increase and reflected the policy of taxation rather than regulation of colonial commerce, yet it was but a small fraction of the increased cost of colonial defense. Nor can it be said to have been an unreasonable burden economically. Most of this revenue came from the duties on molasses and foreign wines and, although the merchants doubtless shifted the taxes with some increase to the consumers, no serious economic oppression was involved. The prohibition of paper money was still enforced, except for the slight relief afforded New York; but the most of the depressing effects had probably passed by this time. Though the colonies did not cease to protest against the prohibition, this represented a demand that was a fairly constant phenomenon of colonial development. Under such conditions the more radical leaders, unable to secure active support from the merchants, found it difficult to stir the people to action. England still maintained the principle that she had a right to tax the colonies, against which the people had risen in protest; but she had withdrawn so much of the legislation designed to put it into operation that a general willingness to drop the dispute as to the principle involved seemed to prevail. Just as peace and prosperity appeared to be in prospect, rather to the chagrin and disappointment of some of the more radical agitators, a new move on the part of England, with totally unexpected consequences, and the renewed propaganda of the politicians once more aroused the colonists to a series of acts which, in conjunction with the stern and determined measures of repression and retaliation on the part of England and several outbreaks of violence against the enforcement of the customs laws, soon led to open revolt.

Tea and the Intolerable Acts. Through a strange fatality the trouble arose over tea, the duty on which had been retained chiefly for the sake

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of the principle involved. Thenceforth this large principle, not merely of taxation without representation but of still greater freedom of self-government, came more and more clearly into view, not simply as a rallying cry to secure unity of action in the demand for relief from vexing regulations and taxes, but as the real and fundamental issue involved.

It happened that just at this time the British East India Company, having a large stock of tea on hand, was threatened with bankruptcy and Parliament was appealed to for aid. In 1772 Parliament had passed an act that provided a remission of only three-fifths of the duty paid on tea imported into England when the tea was reexported to the colonies. This was advantageous to the colonial smugglers of foreign tea as it tended to increase the cost of East India tea in the colonies.

In May, 1773, in order to aid the company Parliament again granted a remission of all the duty paid in England on reexported tea, though still keeping the 3*d.* duty paid in the colonies, and also allowed the company to have its own agents to sell the tea in the colonies, instead of selling it through independent merchants who bought it at the company's auctions in England, as had been the case previously. This act tended to reduce the price of the company's tea in the colonies, thus threatening the profitable smuggling trade and even the legitimate importers, while it transferred the business to the individuals appointed as agents for the company, generally people who had already incurred the dislike of the colonists. This act thus tended to create a monopoly, something particularly abhorrent to the liberty-loving colonists, and it was agreed that, even if it did reduce the price of tea for the time being, the company, as soon as its hold on the business was established, would raise the price again; worse yet, the monopoly would probably be extended to other commodities as well. Their business thus threatened, the merchants were once more aroused to action and, though with greater hesitation and misgivings than formerly lest they should not be able to restrain mob violence, they again joined with the more radical leaders of the artisans and laborers in devising a campaign of organized opposition in the form of an economic boycott such as had been so successful twice before.

Meanwhile other events had aided the radical leaders in their efforts to awaken the people less interested in trading profits against acts subversive of their liberties. In September, 1772, news arrived that customs revenues were to be used to pay the salaries of judges, a system which if extended would at once destroy the chief source of control over colonial officials that the colonies enjoyed. Sam Adams at once stirred up town meetings to protests of alarm and again organized committees of correspondence to facilitate agitation and united action. In addition, the presence of British soldiers in the cities was a constant source of irritation; such outbreaks as provoked the Boston Massacre of 1770 had created an

ill-feeling that was not soon forgotten by the populace. Finally, the stricter enforcement of the customs laws, leading to such acts as the burning of the British naval vessel "Gaspée" in Rhode Island in 1772, helped to fan the flames of discontent.

There was another cause for discontent and restlessness which, because Great Britain was in no appreciable way responsible for it, has been rather generally overlooked; yet it doubtless was a factor of importance. This was the growing feeling among the masses, particularly among the laborers and the back-country farmers, that their interests were threatened by the rising power of the wealthy and more privileged classes in the colonial governments. As was pointed out in the preceding chapter, most of the colonists were deprived of franchise rights. As time went on, the colonial assemblies became less and less representative of all the inhabitants. In Pennsylvania and in the South relatively small groups about the cities or on the plantations frequently controlled both the local and the provincial government; in New England a similar tendency was only less marked. This feeling among a large group that they were being oppressed and that their interests, economic and otherwise, were endangered by the lack of a truly democratic and representative government made them incline readily to any agitation that seemed likely to bring extensive change. Thus, when, in 1773, the course of events brought to the more radical leaders and their following the cautious support of the influential merchant class, those leaders found themselves in a stronger position than ever before to work for the greater freedom of self-government which they held forth as their main objective.

Late in the autumn consignments of the company's tea began to arrive at the different ports. At Charleston its sale was not permitted but it was landed and stored. In New York and Philadelphia it was not even landed but at once sent back to England. In Boston, where the governor appeared bent on action that would necessitate its landing, the Tea Party effectively settled the question by boarding the vessel and dumping the tea into the harbor. Such wanton destruction of property and violation of law thrilled some with enthusiasm, though the more conservative, and even such men as Franklin and John Adams, condemned it. The king and Parliament felt outraged at this mockery of their authority. Forceful measures to punish the offending colony, secure reparation, and enforce obedience were promptly enacted in the so-called five "Intolerable Acts." The port of Boston was closed to all except coastwise trade in a few necessities, effective June 1, 1774, till reparation for the tea, estimated at £15,000, had been made and proper submission was shown; the governor of Massachusetts was given increased powers and his consent made a prerequisite for the calling of town meetings; a new Quartering Act was passed, requiring the colonies to supply barracks

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where they were desired for the troops; and more troops were brought to Boston. A fourth act permitted the trial of British officials accused of violence in enforcing the law in Massachusetts to be removed to England. A fifth law of 1774, the Quebec Act, annexed the region north of the Ohio and east of the Mississippi to Quebec, centralized the government of that province, and allowed the French Catholics freedom of worship. Although it had little connection with the other four acts in origin, it alarmed those colonies having claims to western territory and anxious to extend their settlements and institutions to that region as well as those who were active supporters of the Protestant faith. It should also be noted that opposition to England on religious grounds was widespread among the dissenting sects who feared an increase in the power of the Anglican Church.

The Colonial Reaction and the Declaration of Independence. The punitive acts imposed on Massachusetts aroused an immediate and sympathetic response in the other colonies which sent generous gifts of provisions to Boston, where trade was ruined and a large group of unemployed were in distress. Far more important was the outburst of indignation and alarm at the attacks upon their liberties that the colonists saw in this group of measures. These attacks clearly involved political principles which concerned all, rather than taxes or commercial regulations chiefly affecting small groups, and against such infractions of the liberties they had so long sought to maintain all could unite. From this time on, questions of relief from specific forms of economic oppression played a subordinate part and became merged in the broader and more fundamental demands for liberty and self-government, designed to secure the protection of political and religious as well as economic freedom, which now became the real issue in the minds of all. Recognizing this fact, in the agitation that followed, the more conservative merchants withdrew from or actively opposed the movement toward revolt; others joined it in the hope of exercising a moderating influence; still others wholeheartedly threw their influence to its support. But the actual direction of affairs fell more and more into the hands of the radical leaders backed by a steadily increasing, though never a major, proportion of the general populace whose emotions were insistently played upon by active propaganda.

To bring pressure to bear on England, another economic boycott was proposed more comprehensive than ever before, and, to secure the unity of action essential to its success, the colonies were asked to send delegates to a Continental Congress that assembled in Philadelphia in September, 1774. Of the 56 delegates that appeared, representing every colony but Georgia, the greatest portion consisted of lawyers. The agricultural interests were strongly represented but there were only 11 merchants—a

reflection of the waning influence of the last-named group. This Congress, moved by the steadily growing popular clamor though on the whole still opposed to a break with England, drew up a Declaration of Rights protesting against the infractions upon their liberties and, to enforce an economic boycott, prepared a plan for a Continental Association.

After a careful consideration of the various economic interests affected, it was agreed that after Dec. 1, 1774, they would neither import, purchase, nor consume any British goods whatever, any East India tea from any place, foreign indigo, wines from Madeira or the Azores, or molasses and other dutiable products from the British West Indies; no slaves were to be imported; also that after Sept. 10, 1775, they would not export anything except rice (an exception to secure the adherence of South Carolina), either to Great Britain or to the British West Indies. As the British West Indies were in no small measure dependent upon supplies from the colonies and a score or more members of Parliament were interested in plantations in those islands, the restrictions on their trade brought added pressure to bear on England. At the same time all forms of extravagant expenditure among the colonists were to be discouraged, aid was to be extended to domestic production to supply the scarcity arising from nonimportation, and the prices of such goods were not to be advanced. The action on the part of Great Britain which the colonists demanded as a prerequisite to the withdrawal of the boycott was stated in detail, but it amounted practically to a return to the conditions existing before 1763.

The Continental Association, though it had no legal basis, was approved by all the colonies except Georgia, yet not without opposition from considerable groups chiefly led by loyalists and some moderate merchants or factors. Thoroughgoing arrangements to enforce the agreement were made by individual colonies and towns. They were put into force with no small measure of personal violence and destruction of property and with such effectiveness that the imports from Great Britain fell from about £2,600,000 in 1774 to £200,000 in 1775. West Indian planters joined the British manufacturers and merchants in appealing to Parliament for relief; William Pitt and Edmund Burke counseled moderation and conciliation; but George III and Lord North were obdurate and Parliament, antagonized by this challenge of its authority, was subservient to their wishes. The result was an act of Parliament which forbade New England to trade with any part of the world except Great Britain and the British West Indies, a prohibition soon extended to all the other colonies except New York, Delaware, North Carolina, and Georgia. Before news of this response to their demands reached the colonies, the soldiers of Gen. Gage, searching for military supplies that Massachusetts had begun to collect in preparation for forceful resistance, which seemed

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more and more likely to become necessary, came into conflict with the militiamen drawn up on Lexington common and at Concord where on Apr. 19, 1775 was "fired the shot heard round the world." Events then followed rapidly. The Continental Congress reassembled in May and proceeded to raise an army; the nonimportation and nonexportation agreements were kept in force till they were found injurious to the colonies, and in April, 1776, Congress opened the ports to trade with all the world except Great Britain. Meanwhile Parliament forbade the colonies to trade with any part of the world and the king declared that they were in revolt; to this they replied with the Declaration of Independence.

Summary of the More Immediate Causes. Although this narrative of the course of events, political and economic, in the decade preceding the Revolution has been given in some detail, it should be pointed out that, after all, the economic life of the greater proportion of the colonists was not greatly affected thereby; for the most part it was proceeding much as usual. Settlers on the frontier heard little of the clamor and were but slightly affected. The very large percentage engaged in agricultural pursuits with an essentially local economy were concerned only as the market for such small proportion of their products as was exported was affected. The much smaller groups living in the trading centers along the coast and, to a less degree, in the surrounding agricultural sections largely contributing to their trade, received the brunt of the economic disturbances and the burden of taxation. It was in these localities that the irritating presence of British officials and soldiers was felt. In the great trading seaports the growing number of mechanics and laborers, often inadequately represented in the colonial assemblies, were beginning to develop a class consciousness and a growing sense of their power through united action.

Most important of all, was the fact that in the greater portion of the colonies these places were the centers of public opinion, wealth, and political influence. Enjoying a position of leadership the groups here were in a situation, when their particular interests were threatened, to exercise an influence quite out of proportion to their numbers among the colonists, at least during most of the period and before the greater portion of the populace, whose economic interests were far less affected, had become thoroughly aroused over the more fundamental issues concerning political rights which the struggle eventually brought to the front.

After all, if we attempt to summarize the causes of the Revolution and to estimate the part which economic conditions and forces played in the final outcome, it would appear that, while extremely important, they were subordinate in the minds of those who carried the revolt to a successful conclusion to the political ideals of liberty and self-government with which the colonists had been so strongly imbued throughout their history.

Proximately, the struggle originated in the problems of the economic and political organization of the expanding British Empire. These led to measures affecting the economic interests of a relatively small but very influential group in the colonies. Though the direct economic burden imposed was not great, the colonists not only believed it to be greater than it was but feared it would be increased, and of course acted on this belief. Seeking relief they joined forces with the more radical politicians, many of whom were more concerned in undermining the political power of small groups that dominated some of the colonial governments.

The politicians easily worked upon the growing discontent among the masses: the artisans, laborers, and backcountry farmers who felt that their interests were threatened by the growing power of the wealthy privileged classes in the colonies. An economic depression, chiefly due to other causes but affecting a much larger portion of the population, helped to arouse popular support. The presence of soldiers and many new British officials with the constant friction resulting from the stubborn determination of the king and Parliament to enforce the laws, coming into conflict with the growing effort of the colonies to oppose them, fanned the flames of discontent and accentuated the political issues involved. Meeting with a very considerable measure of success, made increasingly conscious of their growing power, and developing better means for securing increased unity of action, the colonists were emboldened to continue the struggle.

Finally, when the small group of merchants found their economic interests again threatened by acts favoring the East India Company, many of them once more joined with the debt-burdened planters and the radical leaders to stir the populace to action, a task greatly facilitated by the growth of those seeds of political unrest which had been so assiduously scattered among them and so carefully cultivated during the immediately preceding years. When this organized opposition broke forth in violence and induced even more severe measures of punishment and oppression on the part of England, the economic issues were merged in the broader issue. Many of the small groups of merchants whose economic interests had been most seriously threatened withdrew from the struggle or turned Tories; democracy and freedom in self-government became the real and vital issues; and for the sake of these ideals the populace who rallied round the leaders prepared to face the supreme sacrifice involved in war.

The active supporters of revolt were a minority group; chiefly made up, as far as numbers were concerned, of artisans, laborers, and back-country farmers.¹ These were the classes whose economic interests were less affected than most, except for the prohibition of paper money, by

¹ The back country farmers provided some supporters of England, notably the Scotch in North Carolina.

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British restrictions and taxation. But they were a liberty-loving group. The class most affected by the regulation of trade, the Northern merchants, generally tended to oppose revolt; there were numerous exceptions, however, particularly among the smugglers. Among the most active leaders in the revolt, both north and south, were the politicians; and they sought, in local as well as in imperial control, greater democracy and freedom in self-government.

The More Fundamental Causes. After all, this summary of the more immediate and proximate causes of the Revolution tells but a portion of the story and explains only some of the factors entering into the problem—perhaps the least important in any fundamental analysis. Back of this decade of rapidly moving events lay some 150 years of colonial development, to say nothing of English traditions and history. In the conditions that surrounded the colonists in that period are to be found the more fundamental causes of the Revolution, since it was those conditions that helped to nurture and develop in the people that spirit of freedom and liberty which chose revolt rather than submission to an unrepresentative government that sought to curtail their liberties. Those conditions were innumerable and, though their reactions on the colonists were cumulative in effect, they were inextricably interwoven. We can suggest only a few of the most significant: (1) Most of those who migrated to the colonies were seeking freedom from religious, political, and economic oppression; they were from the start a group of active, energetic, liberty-loving people. (2) The economic conditions in the colonies, combining an abundance of land, a scarcity of labor, a scattered population, and a relatively self-sufficing household or local economy, tended to increase their economic freedom, to foster a spirit of individualism and private initiative, and to make taxation particularly obnoxious. (3) The colonies had been established and developed largely through individual initiative and enterprise, with little aid from the government except by way of defense; and for more than a century England had attached little value to the colonies on the mainland.

These facts, combined with the great geographical distance and the difficulties of communication and control, had led to a policy of “salutary neglect” under which the colonies, through a constant struggle, which increased their sensitiveness to encroachments on their liberties in any form whatever, had attained a high degree of local autonomy in their government. Because of this unusual freedom any curtailment of their liberties was the more bitterly opposed. This complex of conditions psychological, religious, economic, geographic, and political had developed in the course of 150 years a spirit of individualism and love of liberty far more ardent than existed in the mother country. In the atmosphere of freedom that characterizes a frontier life the colonies had developed social

institutions and political ideals far in advance of those of England. Yet England under mistaken guidance at this critical juncture chose to adopt a policy of even stricter control. These diverging tendencies, once the colonies had grown to a position of strength and attained unity of action, made a conflict inevitable. Whether it started over economic, religious, or political oppression was a question of fortuitous circumstances. It simply happened to be economic issues over which the first trouble arose.

The only thing that could have averted the struggle was a change in imperial policy based on a recognition of the fact that eventually a strong and powerful colony would prove a still stronger element in the might of empire, both politically and economically, if it were given greater liberty to develop its own economic, political, and social life under self-government. For the commercial policy of England, though the most liberal of the time and not without some justification in the world of that day, was in the long run economically unsound. The prerogatives so insistently upheld by a stubborn king and a blind, unrepresentative Parliament, though in practice allowing the colonists a greater degree of self-government than was enjoyed by the people of England themselves, tended to weaken rather than build up the fabric of empire.

The following century saw England reverse her mistaken position on both of these issues. By 1860 mercantilism, long under attack, had been completely abandoned in favor of freedom of trade and navigation; and, starting with Canada in 1840, the powers of king and Parliament over the larger colonies were gradually abandoned until the Commonwealth of British Nations finally emerged. But in 1775 such a colony was undreamed of; political foresight, the ability to read and understand the lessons of history forecasting the insistently growing demand of the people of the world for greater liberty, economic, religious, and political, was lacking; England chose a diametrically opposite policy and revolt followed.

In the last analysis, therefore, the American Revolution was but a new step in advance in the age-long struggle of mankind for greater freedom. It was carried through by an active minority group which sought through the attainment of independence and self-government to protect and preserve political, religious, and economic rights. Fundamentally it involved the same issue that had wrested the Magna Charta from King John, beheaded Charles I, and driven James II from the throne of England.

For the next step the scene shifted to the colonies where the progeny of England, nurtured in the freedom of frontier life, had advanced much more rapidly than the mother country and, as is so frequently the case, the parent, set in her older ways, failed to understand the change that

had taken place in her children or to sympathize with their more advanced ideals and aspirations.

The attempt to exert parental authority taught the mother country a lesson that was not forgotten, though only slowly accepted; the children also had a lesson to learn. For the very spirit of freedom and liberty which led them to struggle for independence and to establish a great democratic republic soon threatened to destroy it. It was this same individualism, this same lack of a broad spirit of patriotism toward the Union that they had shown toward the Empire, which in the course of the next half century, time and again, seemed likely to disrupt that Union and eventually plunged the country into civil war. Thus this young people had still to learn the lesson—indeed may well be heedful of it yet—that freedom in a great democracy means something more than anarchy and that liberty for all is only to be attained by mutual self-restraint and self-sacrifice.

CHAPTER XII

ECONOMIC ASPECTS OF THE REVOLUTION

The Economic Problems of War. War, if it is prolonged and serious, always necessitates far-reaching readjustments in the ordinary economic life of the people. We may distinguish three outstanding economic problems that face a nation at such a time: (1) The foremost is the problem of producing and distributing the economic goods, both services and commodities, that are necessary for carrying on the war; (2) the problem of devising means of paying for the goods and services that the nation uses for this purpose—the question of financing the war; (3) the problem of supplying the ordinary economic wants of the people, since only a small proportion are ever actively engaged in the conflict, and it is desirable, as far as circumstances permit, that the noncombatants should be able to pursue their usual mode of life; if they have to undergo serious deprivations, disaffection may result. It should be noted that this last problem is made subordinate to the first; for the time being the political unit of organized society which we call the nation has set up one goal as its immediate and supreme objective—the winning of a war—instead of the many, varied, less definitely conceived and formulated objectives that exist in time of peace. All other interests then become subordinate to this objective; even the sacrifice of life itself may be demanded.

The individualistic, competitive industrial society, motivated and guided by the desire for private profit, upon which we so largely depend to supply our innumerable economic wants in time of peace, is found not to provide the methods best suited to attain the supreme purpose which the nation sets up for itself in time of war. Yet the ordinary bases and organization of industrial society cannot be suddenly and entirely cast aside on the outbreak of war; even were this possible it would not be desirable. On the other hand, it is obvious that extensive and far-reaching modifications of the ordinary economic life of the nation are essential if its economic and other social resources are to be conserved and quickly mobilized so as to contribute the utmost possible to the attainment of the ideal which for the moment is supreme. By bearing in mind the economic resources and organization existing in the colonies together with the character of the three chief economic problems arising out of war, we may obtain a clearer understanding of the significance of the facts and the narrative of events, together with the lessons to be learned therefrom, to which we now turn.

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The Economic Resources and Organization of the Colonies in Time of War. The total population of the colonies, excluding the slaves, upon which they could draw for an army was something over 2,000,000. How many were actually in the regular army at one period or another is unknown, but the number in service at any given time was generally very small and probably fluctuated between 7,000 and 30,000. The largest number under Washington's immediate command at any one time was 18,000; ordinarily his force was between 5,000 and 10,000 men. The first economic problem was to provide food, clothing, and munitions for these troops, a task for which the colonies were most inadequately prepared. Fortunately the soldiers had something with which they could start; some stores had been collected in advance and guns and a small amount of ammunition were fairly common possessions; if necessary at first, the men could wear their ordinary clothing in place of uniforms and many of them did. It was thus a motley array over which Washington found himself placed in command, and the scanty supply of ammunition at Bunker Hill, as on numerous occasions, necessitated a sudden retreat.

Yet clothing and guns soon had to be replaced, and fresh supplies of ammunition and food were an almost daily necessity. Guns and ammunition had long been made by the colonists, but they could not be produced in such quantities as were now required; when it came to uniforms and woolen clothing, the difficulty faced is but suggested by an earlier comment that there was not wool enough in the colonies to supply the people with hats and stockings alone. Wool had always been scarce in spite of special efforts to increase the supply, and it now became necessary to meet this need by importations, some supplies being obtained in a roundabout way even from England. As far as food was concerned the supply in the colonies as a whole was more than adequate; the chief problem was to get it to the army where and when it was needed.

In fact, even more serious a question than the actual existence in the colonies of the requisite supplies for war was the problem of organization incident to gathering those supplies and distributing them speedily to the places where they were needed. The facilities for communication were slow, the means of transportation overland were totally inadequate; yet they had to be used in the main as the commonly employed water route along the coast was commanded by the British navy which, since the colonies lacked any real navy of their own, they could not oppose and could only hope to evade.

In addition there were the difficulties arising from the lack of a well-organized and powerful central authority enjoying the unhesitating obedience and the wholehearted cooperation of all the people. The Continental Congress, being the only body representative of the colonies as a whole, assumed general direction and control of affairs; but its

methods were cumbersome and its actual power was slight. It could try to borrow funds but it could not levy taxes; it might implore the different states to do this or that, but they did as they saw fit; it could discuss, devise, and plan but, when it came to action, most things still rested with the thirteen separate governments that the different states had chosen to look after their own interests as well as the common cause. A willingness to make unstinted sacrifices for that common cause was by no means universal either among the state governments or the people at large. Each state seemed to fear that it might have to bear more than its share of the burden or that its liberties might be endangered by a weak and impotent Congress tottering under a burden far beyond its power to sustain.

Among the populace only a minority—possibly a third, it has been estimated—were active supporters of the Revolution; the influential and wealthy though small group of British officials and Tories was in active opposition whenever possible; and a large group, perhaps another third, remained indifferent to the struggle. Many sold provisions to the enemy for British gold far more eagerly than to the Continental Congress for its paper promises of dubious value, and few relished the taxes or requisitions imposed by the states any better than the taxes that had been imposed by Great Britain. In fact the very conduct of the war only too well exemplified the spirit of individualism and liberty that brought on the struggle.

Great Britain's Economic Resources and Organization. The contrast between this situation as regards the economic resources and organization of the colonies and those of Great Britain was marked. The population of Great Britain proper at that time was around 9,000,000 and she already had a fair-sized and well-disciplined regular army. In addition she was in a position to hire mercenary troops from Germany and actually did obtain some 30,000 soldiers from that source, who were at least well disciplined even if they had no interest in the struggle and consequently "did not fight any harder than they had to." With her navy England was in a position to strike at a vulnerable point of the colonies, their extensive foreign and coastwise trade.

In the economic resources at her command Great Britain was rich as compared to the colonies; she herself produced or could obtain all the supplies that were necessary and her credit was good. Her extensive foreign commerce might occasionally be harried by such men as John Paul Jones, or the numerous privateers, but without foreign aid the colonies could not seriously injure it. Her government was sufficiently strong and centralized so that, even if not particularly efficient, it gave her a decided advantage over the colonies. At the start the whole country generally supported the war though in the later years increasing opposition to its continuance developed. In addition, England was able to count

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upon some assistance from the Tory group in the colonies, though this did not prove particularly effective. Finally, the struggle being centered in the colonies, the ordinary economic life of England was scarcely disturbed and the loss of the colonial market was largely offset by the increased demand for war supplies from Europe.

On the other hand, the very distance that separated England from the scene of the conflict and the slow communication facilities helped to offset her advantages. Similarly the scattered population and the essentially local economy that prevailed in the colonies greatly increased the difficulties of the task that confronted England; for, although her navy could blockade the ports and, with the aid of a small army, occupy the chief cities or even a considerable portion of a province, this produced little effect on the rest of the population, particularly the backcountry farmers who made up the bulk of those most actively supporting the Revolution. Most of the colonists could continue at their usual activities and then quickly spring to arms at the approach of the enemy, dispersing again when the danger had passed. To subdue her rebellious subjects under such circumstances England, as was recognized, would require a large regular army. Still, with the resources at her command, she might have been successful. Had England acted quickly, avoided unnecessary irritation of the colonists, and wholeheartedly thrown all her energy and superior economic resources into the contest from the start, the result might have been very different. But she had to watch France and failed to act decisively and take advantage of her opportunity, with the result that the small Continental Army under Washington and the colonial militia enabled the colonies, in spite of their limited resources, to continue the struggle not without considerable success, until aid was forthcoming from outside sources.

Outside Aid for the Colonies. The outside aid that was given the colonies was due primarily to jealousy of England rather than to a desire to help the colonists or to any great admiration for the principles for which they fought. Though French philosophers praised those principles and a few men like Lafayette eagerly flung themselves into the struggle for liberty, Louis XVI of France and his minister, Vergennes, saw in the colonial revolt only an opportunity to take revenge on their old rival, perchance to secure a share of the colonies' commerce, and to recover some of the losses they had suffered through the Seven Years' War. From the first, France had secretly helped to supply the colonies with guns and ammunition; when news of Burgoyne's surrender arrived giving hope of colonial success, France early in 1778 recognized their independence and entered into treaties for a commercial and military alliance. Similar reasons led Spain in 1779 to declare war on England rather than to extend much direct aid to the colonies. The following year England declared war

on Holland as the latter country had joined the Armed Neutrality, formed by the nations of northern Europe to protect their commerce, and had in various ways given indirect aid to the colonies.

All this helped the colonial cause by compelling England to divert her activities and by making the subjugation of the colonies a secondary matter. Thus the old political and economic rivalries, the same struggle for colonial empire which, as previously described, had played so prominent a part in the wars between European nations throughout the colonial period, served the colonies in good stead in their hour of dire need.

France at that time was the most powerful nation in Europe; her population was more than double that of Great Britain; her wealth much greater and, though the credit of the government was already seriously strained, it was still possible to lend considerable sums to the colonies. Moreover, France was in a position to supply the colonies with nearly all the needed materials for carrying on the war except woollen goods. Also, she had a powerful navy which had been rapidly built up since 1763 and could dispute England's control of the sea. This was of the utmost importance for it not only helped to open up the coastal waterway and the ocean to American shipping but aided the Americans and checked the British in the movement of troops and supplies. Washington's statement in 1780 that ". . . a decisive naval superiority . . . is the basis upon which every hope of success must ultimately depend" was borne out by the French naval operations preceding the surrender at Yorktown. In addition, French ports provided a convenient basis of operation for the raids on English commerce carried out by the small colonial navy and the large number of privateers. Thus through the aid of French soldiers, naval vessels, war supplies, and loans, the resources of the colonies were greatly augmented at the same time that England was compelled to divert her resources to fight against France and later Spain and Holland in other parts of the world.

Getting Supplies for the Colonial Army. Bearing in mind these conditions as to resources and organization, we can now turn to inquire how successfully the colonies met the first problem of securing and distributing to the troops the necessary war supplies. As far as supplies not produced in sufficient quantity in the colonies were concerned, it would appear that, except for clothing, a fairly adequate quantity was obtained from abroad, at least after 1777, by which time experience in discovering new routes of trade and the aid of the French navy enabled the colonies to bring in the things most needed. Early in 1776 Deane was sent to France to secure cannon, arms, ammunition, and clothing for 25,000 troops and before the year was over these supplies began to arrive, though the English captured a considerable portion. In addition to these things there was great need of salt, blankets, duck and sailcloth, lead, flint, tin, copper,

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medicines, and surgical instruments. The high prices that prevailed offered a great inducement to traders to obtain these goods, and before long means were devised for securing them either in the West Indies or direct from the Continent. No small quantity was obtained in an indirect way from England through Holland. In some cases, too, the vessels captured by privateers yielded cargoes that helped to alleviate the scarcity.

At the same time the colonies themselves made a great effort to increase their own output of the supplies most needed. The nonimportation agreements, although unfortunately operating to make the stock of goods ordinarily imported unusually low at the time when the war started, had also helped to stimulate domestic manufactures. Thus, in spite of the obstacles presented by the scarcity of capital and skilled labor, the colonies, often by the means of public grants and favoring legislation, were able considerably to augment their manufactures of powder, guns, iron, and cloth. Especial efforts were made to conserve and increase the sheep flocks to supply wool. As far as the most essential food supplies were concerned, the colonies as a whole had a great abundance for they had always exported a considerable surplus. Salt and sugar were the two things most needed from abroad; yet the real problem as regards food was not so much to increase the amount as to get the existing supply to the required points.

The Distribution of Army Supplies. In fact throughout the war, especially after 1777, it was the difficulties incident to the acquisition and distribution of the supplies actually available that most seriously threatened the success of the war as far as economic factors were concerned. Aside from the effect of the methods used to acquire supplies (involving the problems of financing the war, which will be taken up later), the distribution of the available supplies was chiefly shaped by the facilities for transportation and communication and the efficiency of the governmental organizations that were in charge of the task. The poor facilities for communication and transportation have already been described. It took 17 days for relays of express riders to carry the news of Bunker Hill to South Carolina. It was always uncertain whether vessels sailing a similar distance along the coast, even if they escaped capture by the British, would be able to make the trip in several days or many weeks. Good roads were few and far between and often became well-nigh impassable. Draft animals and wagons were seldom available in the places required and the farmers were naturally loath to part with things so essential to their own work.

The problem of organizing a new government, developing its administrative departments, and securing an efficient coordination of efforts between it and the thirteen separate state governments, most of which were also undergoing reorganization, proved to be an almost insuperable

task. At the same time that the Declaration of Independence had been issued, the Continental Congress authorized a committee to draw up a plan for a confederation between the states. The task thus imposed, being delicate as well as difficult, involved prolonged discussion. More urgent matters compelled long continued delays so that it was not until the last of 1777 that the Articles of Confederation were finally agreed upon and referred to the different states for ratification. It then required over three years more of delay before the last state had ratified, in 1781. By that time the war was nearly over. In the meantime Congress exercised only such powers as the tacit consent of the states permitted. It was little more than a committee where representatives of the thirteen states, each of which claimed independent sovereignty, could get together and discuss plans for such unity of action as would help to establish the independence of each and all; but each state still remained free to act as it saw fit on such recommendations as Congress made. Such lack of centralization of power, combined with provincial and personal jealousies or the fear that one state might have to make greater sacrifices than another, made it impossible to conserve, mobilize, and distribute the available military supplies without great delay, waste, and inefficiency.

At first Congress tried to buy supplies for the army but often found its activities opposed by the states also seeking supplies for the militia or for local needs. Later, when its own financial resources were exhausted, Congress assigned to the states the task of gathering and forwarding the army supplies, but there was never any certainty of their being forthcoming and the system broke down. The French and Continental armies were often competing with one another in their purchases, and many colonists were glad to sell their products for the coin offered by the English army. The numerous embargoes on exportation were often imposed through a mistaken notion about the chief causes of the difficulty in obtaining supplies; they frequently only increased the evil they were designed to remedy. When Rhode Island and Massachusetts complained that a Connecticut embargo caused suffering among their people, no relief was afforded. Under such chaotic conditions of government and with this conflict among strong local and selfish interests, the astounding thing is that the states accomplished as much as they did; only indomitable energy and patriotic self-sacrifice on the part of some made even that much possible.

In the face of such difficulties it is not surprising that the actual results obtained in supplying the needs of the army were totally insufficient and often threatened to result in serious disaster. An adequate supply of proper clothing was almost always lacking and insufficient supplies of food, fuel, soap, and medicines were not unusual. The suffering which occurred during the winter of 1777-1778 at Valley Forge has be-

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come traditional and, though conditions improved under more efficient administration during the following year, the suffering was as great if not greater during the winter of 1779-1780. At this latter date Congress in desperation threw the burden of feeding and clothing the army on the states, but with such disastrous results that the system was subsequently abandoned; it was not until 1781, after a more centralized organization had been provided and Robert Morris introduced the contract system, that appreciable improvement took place.

In 1780 it was reported that the soldiers were on half rations most of the time and some troops had to be discharged for lack of food. After the battle at Guilford Court House many fainted of hunger. At the battle of Eutaw some fought without clothing, having pieces of moss tied on their shoulders and flanks to keep the musket and cartridge box from galling. In July, 1782, Gen. Greene reported that for over two months more than a third of his men were practically naked, having nothing but a breech-clout, and that they constantly suffered from a shortage of food. When, on top of the physical suffering that such conditions involved, there was added constant delay of the pay that rapidly dwindled in its purchasing power and a not infrequent shortage of ammunition, it is not surprising that men hesitated to enlist or re-enlist, that others deserted, and that threats of mutiny arose. That, in spite of all this, the general morale was so well maintained shows the spirit that was back of the Revolution.

The Financing of the War. In no small measure the difficulties that developed in the effort to get the necessary war supplies had their origin in the second great economic problem of war—its financing—and the methods chosen in trying to meet that problem. The Continental Congress could borrow money but, having no power to levy taxes to pay its debts, its credit was soon impaired and its borrowing power greatly circumscribed. In the course of the war about \$8,000,000 was borrowed abroad. Over three-quarters of this total was advanced by France and less than \$200,000 by Spain; toward the end of the war, when the French government found its own credit severely strained by the cost of the struggle, a loan of over \$1,300,000 was obtained in Holland. France also advanced subsidies—practically a gift—to the amount of about \$2,000,000. Most of this money was spent abroad for supplies, but a portion was used in the form of foreign drafts to pay interest on the domestic debt in the hope of sustaining this form of credit and a small amount was sent to the colonies in the shape of specie.

It was expected that Congress would export American products to France to be sold and help pay off the French loans, but actually very little was sent; in fact Congress was constantly forced to importune abroad for more loans which became increasingly difficult to obtain when it was seen that so little effort was made to pay off the debts already

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outstanding. Only the success of the army made it possible to obtain the final loan from Holland that carried the country through to the end. Private individuals showed far more initiative than Congress in using this method of exporting goods to obtain funds to pay for the supplies brought in from abroad.

From domestic sources Congress succeeded in borrowing over \$67,000,000, though the specie value amounted to less than \$11,600,000. The different states, not meeting with success in their individual efforts to borrow abroad, according to an estimate of Hamilton's, raised about \$25,000,000 additional from this source. Congress also issued certificates of indebtedness which were given in payment for supplies or other purposes, the amount outstanding as figured by Hamilton in 1790 being nearly \$17,000,000. But borrowing from domestic sources was beset by many difficulties. Capital had always been scarce and the available supply of lendable funds was further decreased when many of the wealthy class had become Tories. Furthermore, as we have previously seen, there were no institutions in existence for mobilizing the credit resources of the country and facilitating the financial operations of the government such as are afforded by a modern banking system. It was the difficulties arising from this undeveloped condition of the financial institutions that led Morris to organize the Bank of North America under a charter from Congress in 1781—the first modern bank in the country. Chiefly on the basis of a government subscription of \$250,000 in specie obtained from the French loan, the bank began business; during the remainder of the war it was able to use its credit in extending short-time loans to meet the immediate needs of the government as well as to facilitate financial operations in other ways. In the absence of such an institution during the most trying period of the war, appeals for loans had to be made to private individuals, especially those furnishing supplies, and often government officials or officers of the army such as Morris or Washington found themselves in a position where they had to use their personal funds or credit to obtain immediately needed supplies. But the most serious obstacle to borrowing was the impaired credit of both Congress and the separate states, partly owing to the uncertainty as to the outcome of the struggle but chiefly to the inability of Congress and the unwillingness of the states to impose the taxes necessary to sustain their credit.

Taxation during the Revolution. Taxation necessitates an outlay that has always been peculiarly obnoxious to people, so that in time of war, when so many additional sacrifices are called for, a government always hesitates to impose another burden of such an unpopular character for fear of arousing greater opposition to the war. In addition to this we have seen that the conditions in the colonies had made taxation more than usually disliked and, finally, that opposition to taxation by Great Britain

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had played a prominent part among the proximate causes which led the colonies to revolt. Under such circumstances the imposition of heavily burdensome new taxes, however desirable, was hardly to be expected.

The Continental Congress, having no power to levy taxes, could only apportion the sums that it needed among the states and request them to levy the taxes necessary to obtain those amounts. At the same time the states required more revenue to meet their own increase in expenditures, for Congress supplied them with only a portion of the funds they needed; so a further increase in taxes was called for. Thus the actual imposition of all new taxes rested entirely with the states and they were free to act as they saw fit. The general hatred of taxation and the selfish fear lest each state should bear more than its share of the common burden led to constant delay and inaction, and the undeveloped state of the previously existing tax system combined with the chaotic conditions generally would have made adequate taxes difficult to collect even if greater willingness to pay them had existed.

Between November, 1777, and October, 1779, Congress requisitioned the states for \$95,000,000 in paper money, but obtained barely half this amount, and the specie value of the sum received was actually less than \$2,000,000. As the paper money previously put out by Congress had by that time become almost worthless, Congress in 1780 requisitioned specific supplies such as corn, beef, and pork, from the states; but this proved a very awkward, difficult, and wasteful method and less than \$1,000,000 worth in specie value was obtained. There followed up to April, 1781, three more requisitions for \$10,000,000 in specie, but the states paid in to Congress less than \$1,600,000; succeeding requisitions up to the end of 1783 yielded a slightly smaller return.

In levying taxes to meet their own direct expenditure the states took much the same line of action; they preferred to sell their notes or issue paper money as long as anybody could be induced to accept them, but they were constantly postponing the levying of taxes heavy enough to redeem obligations and so rapidly undermined their own credit. The states did almost nothing to levy taxes until 1777 when a general movement to pass such laws commenced; but enforcement of collections was generally very lax and previous to 1781 actual receipts were small. The financial records were more creditable, however, in New England, New Jersey, and Maryland.

The Issues of Paper Money and Their Effects. Under such circumstances it is not surprising to find both the Continental Congress and the states falling back upon that easy and time-honored device, so common in colonial times, the issue of paper money. Massachusetts started the movement in May, 1775, with an issue for the purpose of providing pay for the soldiers, and the rest of the states soon followed her example. New

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issues were put out from time to time as the needs of each state seemed to dictate, though following the request of Congress in 1778 that the states refrain from new issues there was some letup, only to be followed by a vastly greater flood in 1780-1781. By the end of the war the total of the states' issues had mounted to nearly \$210 million. Of this total Virginia issued more than half and the two Carolinas almost a third, mostly during 1780-1781; the amount put out by the rest was relatively very small. Virginia and Georgia finally made their notes redeemable at 1,000 to 1 and North Carolina at 800 to 1; the other states did somewhat better, the ratio in most being between 40 and 100 to 1.

The issues of Continental currency by Congress even surpassed the total put out by the states, amounting in all to over \$240 million. Beginning in June, 1775, the issues authorized during that year were only \$6 million in amount. The following year \$19 million was authorized and in 1777 an additional \$13 million. Depreciation of this paper money had begun in 1775 and after 1777 its declining value increased the necessity for still larger issues so that over \$63 million was authorized in 1778. This of course only hastened the decline in its value and by the end of the year \$1 in paper was worth only about 5 cents in specie. During the next year over \$140 million was authorized, but this enormous additional load finally broke the camel's back; the Continental currency became almost worthless; it would purchase nothing and Congress had to devise some new measures of relief.

In March, 1780, in order to draw in and cancel the outstanding issues Congress requisitioned the states for \$15 million a month for 13 months to be paid in Continental currency; under this law some \$119 million was received and destroyed. At the same time provision was made for a new issue, called "new tenor," not to exceed in amount one-twentieth of the old turned in, and about \$4 million was put out. Also it was provided that the old issues should be accepted in place of silver at the ratio of 40 in paper to 1 in silver. Such action was virtually repudiation of debts and a confession of bankruptcy on the part of Congress. As Franklin said, "This currency, as we manage it, is a wonderful machine. It performs its Office when we issue it; it pays and clothes Troops and provides Victuals and Ammunition and when we are obliged to a Quantity excessive it pays itself off by Depreciation." This quite ignores the accompanying evil. At a later date under the funding act of 1790 it was provided that the old issues of Continental money might be accepted in payment for the new government bonds at the ratio of 100 to 1 and about \$6 million out of the \$78 million then estimated to be still outstanding was thus redeemed; the remainder died an inglorious death in the hands of the holders. But the phrase "not worth a Continental" still survives to remind us of the outcome of this experiment with paper money.

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Some of the measures and results that accompanied this resort to paper money deserve attention for they afford important lessons concerning the difficulties and evils that are involved in the use of such means for financing war. The depreciation in the value of the Continental currency that took place has been described. The value of such paper money depends upon the prospect of its ultimate redemption at par and upon the amount issued, other things remaining the same. Hence, as the issues increased and the prospect of their redemption at face value rapidly waned, owing, first, to the failure of the states and Congress to make any adequate provision for redemption and, finally, to the virtual act of repudiation, they inevitably sank rapidly in value after 1777.

The moment depreciation set in specie began to disappear from circulation under the operation of Gresham's law and prices began to rise. All sorts of measures were resorted to in the effort to prevent depreciation of the paper money and, although some of these measures doubtless slightly checked the decline in its value—often at the cost of other evils—they were in the long run powerless; the one thing absolutely essential to success—adequate taxation to provide for prompt redemption—was a measure that the colonists could not be induced to adopt. Nearly everything else was tried with results that were not only vain but often otherwise harmful.

The scarcity of some commodities, due to the cutting off of the usual sources of supply or the abnormally increased demand following the outbreak of war, brought about a rise in their prices quite independent of the rise due to the depreciation of the currency. But it was impossible for the people to distinguish between the advance in price due to each cause; they were inextricably intermingled and thus afforded ground for the charge that people were attempting to buy up supplies, corner the market, and get a monopoly. Nor was this charge without basis in fact, for in a period of rapidly mounting prices, no matter what the cause of the rise, there is always a rush to lay in a stock of goods, both on the part of those who really wish to use the goods themselves and those who want to take advantage of the chance to secure the large profits which such a rise makes possible. Through the stimulus to such action the issues of depreciated paper hastened the rise in prices and also increased, at least temporarily, the scarcity of goods needed by both the people and the army. To remedy this evil the various states resorted to laws prohibiting the forestalling and engrossing of goods in the effort to profit from the increase in prices. This evil was also one reason for the numerous attempts to fix maximum prices, though the chief reason was found in the desire to check the depreciation of the paper money.

In order to create a larger field for the use of the Continental currency and to lessen the likelihood of its depreciation by making it universally

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acceptable, Congress recommended that the states make it legal tender in payment of debts; and the states complied with the request. Even before this was done depreciation had started and further action was deemed desirable. This took the form of laws forbidding people to ask higher prices for goods when payment was made in paper money than were asked when payment was made in specie. People who did so and those who refused to accept the paper money were denounced as enemies of the country and often subject to boycotts, fines, imprisonment, and actual violence. But such action only hastened the disappearance of specie from general circulation and did not check the rise in paper money prices. Therefore the next expedient was to try to fix prices in terms of the paper money.

As early as December, 1776, representatives from the four New England states held a price convention which drew up a tariff of prices and wages. It was doomed to failure because not all the states enforced it and, since the prices fixed were too low compared to the actual value of the paper money, goods tended to flow from any state where the schedule was enforced to the states where it was not enforced and where prices were higher. This of course worked to the disadvantage of the state enforcing the schedule and soon compelled it to abandon the attempt. Inability to agree led to the failure of a similar convention among the middle states a few months later. Following a recommendation by Congress of new price conventions, the New England states in January, 1778, drew up a new list of fixed prices and wages at a level about 75 per cent above the prices of 1774, which provided that retail prices were not to exceed wholesale prices by more than 25 per cent plus the cost of carriage. As Connecticut was the only state that took action and tried to enforce the schedule, the attempt soon broke down.

When Congress next passed resolutions advising price fixing in November, 1779, the currency had so depreciated that it recommended a level not to exceed 20 times the prices of 1774; but by that time the paper was so nearly worthless that action was vain. The Massachusetts General Court declared that the previous attempts had "shut up our granaries, discouraged Husbandry and Commerce and starved our Sea Ports . . . created such a stagnation of Business and such a Withholding of articles as has obliged the people to give up its measure or submit to starving."

The states repealed their legal-tender laws and by the close of 1780 this paper practically ceased to circulate, except in the Southern states where by 1782 it was worth about 1,000 to 1 in specie. Consequently trade was thrown back upon all the inconveniences of barter till specie began to come out of its hiding places and the supply was augmented by that brought in for the expenditures of the French and British military and naval forces. Thus the attempts to counteract the effects of the powerful

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economic forces at work proved a dismal failure. Although the statesmen of the time were not generally ignorant of the economic principles involved, they, like so many others even today, underestimated the power of the economic forces against which they were struggling, and the weakness of the government made it vain to hope for even a slight measure of success.

More serious than the failure of these futile efforts to check depreciation were other consequences which attended this resort to paper money as a device for financing the war. One result was to discourage men from enlisting in the army and to cause unrest among those who had enlisted. At the start the pay of a private was about \$7 a month but, as the Continental paper in which he was paid depreciated, this amount was estimated as worth only about \$1.50 by May, 1778. The rate of pay was then raised, yet depreciation was so rapid that by August, 1779, the specie value was only about a third of a dollar; so it went on, still another increase being more than offset by the depreciation. At a period when the soldiers saw many civilians making large profits through trade while they were facing all the hardships and dangers of army life, such compensation was scarcely calculated to inspire them with zeal for the cause, the more so when even this pay was often months overdue. That refusals to reenlist when their terms expired were common or that desertions and serious threats of mutiny should occur was to be expected.

A second result, owing chiefly to the methods used in trying to prevent depreciation through price fixing, was to increase the difficulty in obtaining supplies for the army. As long as the prices fixed were below the current market prices in paper money, as was nearly always the case, it imposed a sacrifice on those who offered their goods for sale to the government. The more patriotic might still be willing to sell, but others refused or sold to the British army or, when threatened with impressment of their supplies, did their best to hide them; and the government was too weak to prevent it. In short, at a time when the government was so powerless and inefficient that private initiative had to be relied upon largely to provide the needed supplies, the action of the government was of a character to discourage such initiative by measures that often imposed financial losses on those conforming with them. These short-sighted measures only increased the difficulties of the situation and their very impracticability led to their being ignored or abandoned.

A third result of the resort to depreciated paper and the failure to levy adequate taxes was the tendency to increase the cost of the war to the government. The resulting rise in prices increased the amount of money or bills of credit that Congress and the states had to put out to purchase supplies. Although the paper money was practically repudiated and so did not eventually involve any appreciable expense so far as the government was concerned, most of the bills of credit of both Congress

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and the states were finally redeemed at par; the government thus paid to the holders a greater value than it had ordinarily received for the bills when they were issued. Although no accurate calculation is possible, it is highly probable that, even allowing for the gain to the government through repudiation of the paper money, the net result was to increase the cost of the war to the government. Judged from these effects of paper money on the actual conduct of the war, it is clear that this device seriously increased the difficulties of that problem; but, before passing final judgment on the question as to the justification for its use, we must consider other results as they affected the general economic life of the people during these difficult years.

Economic Life of the People during the Revolution. The third great economic problem during a period of war, as has been pointed out, is that of providing for the usual economic wants of the people as far as that is compatible with the effective prosecution of the war. The dominantly rural life of the people and the essentially local or provincial economy that prevailed resulted in the effects of war, even when that war was waged on their own soil, being much less serious and widespread than would have been the case in a country with an intricate, interdependent, and highly organized national economy. For this reason, except in the regions temporarily occupied by the armies or subject to Indian attacks, the economic activities of the interior agricultural sections of the country went on much as usual.

After 1776 the farmers of the New England states suffered little inconvenience and in the South the rural population was left almost undisturbed until 1780. Along the frontier sporadic Indian raids caused frequent alarm and some sections were temporarily abandoned, but the general effect was slight. The most serious danger that confronted the farming population was the possible loss of the export trade in the plantation staples of the South and the foodstuffs of the middle states. Since the outside world needed their products, it was not long before ways were devised for sending out considerable quantities, though the British occupation at one time or another of Boston, Newport, New York, Philadelphia, Charleston, and Savannah was a serious obstacle. It may be presumed, however, that increased prices helped to offset the smaller volume of goods sold. In addition, the needs of the armies increased the domestic demand for foodstuffs, and war provided the debt-burdened planters welcome relief from the necessity of paying their English debts. Before the war was over, however, many suffered heavy losses of their slaves.

Much more serious in the extent of the changes involved than in the case of agriculture was the effect of the war on foreign commerce and the fisheries, though it must be remembered that the proportion of the population directly employed in these activities was relatively very small.

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The New England fisheries, though not completely destroyed, came nearer to being ruined for the time being than any other important branch of industry. Whaling almost ceased. The chief relief afforded the fishermen was to join the crews of privateers, an occupation that provided such chances for large profits that it attracted many landmen as well, and increased the difficulties of securing enlistments in the army. At the outset of the war commerce was seriously impaired. In part this was due to the loss of the English markets where colonial products had enjoyed many favors, but the chief loss arose from the interference with the trade to other countries through the activities of the British navy and privateers.

Although no adequate statistics are available for this period, it would appear that by 1778 new routes had been developed, either direct to the Continent or through the West Indies, that made possible a very considerable trade which, though at times meeting with heavy losses, often yielded enormous profits. Also, many merchants took advantage of the opportunity to convert their ships into privateers, and the decreased supply of foreign manufactured goods gave an impetus to domestic manufactures that provided an additional field for those who lost their usual means of earning a livelihood. Certainly numerous contemporary observers indicate that after 1778 the old commercial centers, Newport excepted, showed little signs of distress and often appeared very prosperous. Probably the heaviest losses in commerce fell upon the merchants who became Tories. Those who did not live in ports occupied by the British army were soon ruined or forced to flee; many of those who temporarily enjoyed British protection eventually lost not only their business but much of their property as well. In the latter years of the war, especially, the property rights of the Tories were often treated in a way that today would be unhesitatingly condemned. In the end nearly 100,000 of this group left the country.

The Effects of Depreciated Paper Money on the General Economic Life. When we consider the economic life of the people as a whole, it appears quite probable that the most serious difficulties and derangements were occasioned less by the actual operations of war than by the reactions that followed in the train of depreciated paper money. In the first place, when this paper was made a legal tender, it resulted in a serious injustice to all creditors whom the debtors now hastened to pay in money often worth but a fraction of the amount originally borrowed. As a contemporary writer said,¹

He was reckoned the honest man who from principle delayed to pay his debts . . . In many instances, the earnings of a long life of care and diligence

¹ RAMSAY, DAVID, "History of the American Revolution," Philadelphia, 1789, vol. II, p. 136.

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were, in the space of a few years, reduced to a trifling sum . . . A hog or two would pay for a slave; a few cattle for a comfortable house, and a good horse for an improved plantation. The dreams of the golden age were realized to the poor man and the debtor, but unfortunately what these gained was just so much taken from the others. . . . Truth, honor, and justice were swept away by the overflowing deluge of legal iniquity . . .

Another result of inflation that caused suffering and injustice was the effect on those who worked for a salary or wages. In a period of rapidly rising prices salaries and wages, in general, do not advance so rapidly as the prices of commodities and consequently people dependent upon such sources of income find themselves compelled to lower their standard of living. The way in which the pay of the soldiers was affected has already been described and during this period there were frequent complaints from other groups who were becoming restless at the rising cost of living. In part such losses may be offset by increased employment, but the chief alleviating factor in the situation at this period was the fact that the number of hired workers was so much smaller relatively than it is today, otherwise the suffering from this cause would have been more serious and widespread.

At the same time that depreciation injures some groups it works to the advantage of others. Not only are debtors relieved but, as long as prices continue to rise, the profits obtained in industry and trade tend to become high, for anybody who has produced or bought goods at a low cost gets an extra money profit through selling them later when prices are high. Thus an artificial stimulus is afforded industry and trade; those who take advantage of the situation make money rapidly and, having made it easily, are apt to spend it freely in luxurious living; anybody who has money will want to buy things as soon as possible for if he delays it will depreciate on his hands. Consequently speculation, extravagance, and a general appearance of prosperity are created.

Doubtless such conditions explain in part the basis for the contemporary statements concerning the luxurious expenditure and general contentment that prevailed. When Franklin's daughter wrote him from Philadelphia in 1779 that "there was never so much pleasure and dressing going on" and asked him to send her some French finery, he expressed astonishment that the people could be so thoughtless and extravagant at such a time and gently rebuked her for her request. Jefferson deplored "the disposition to luxury." Pickering in 1782 wrote that "the citizens in general of the United States indulge a luxury to which, before the war, they were strangers." In 1780 Joseph Reed said, "The country not the immediate seat of either army is richer than when the war began." Others commented similarly, for the losses that fell upon some were apt to be lost sight of through the attention attracted by the more spectacular

prosperity that fell to the lot of others. Moreover, it must not be forgotten that the full effects of the orgy of depreciated paper money were not realized until after the war was nearly over when the inevitable reaction brought a depression with heavy losses and widespread discontent.

Still other effects of depreciated paper were seen in the general instability and disorganization of industry that developed as depreciation advanced. Great uncertainty and risk attended all financial transactions and eventually the paper money tended to be discarded altogether in favor of the cumbersome method of barter. The efforts to check depreciation through price fixing tended to increase the scarcity of goods for the general public as well as for the army. The people of Boston complained that they were suffering from lack of food because the farmers would not bring in their produce for sale at the established prices and shopkeepers frequently preferred to close their doors rather than sell their goods under such conditions.

Finally, it is to be noted that the steady depreciation of the paper was really a tax on those who held it while it declined in value. Paper money was resorted to because of the great popular hostility to taxes, but after all it did not enable the people as a whole to escape being taxed; it only altered the form in which the burden was imposed and enabled some to gain at the expense of others. In so far as the indirect form which these taxes took can be said to have fooled the people because they did not really understand what was taking place, it lessened the opposition to carrying on the war; but the resulting burden of taxation instead of being imposed in a more equitable way upon those who should have borne it, as might have been done by systematic taxes, actually fell in a very inequitable way upon different groups of the people and did great injustice.

Having now examined the results both on the economic conduct of the war and on the general economic life of the country which followed from the resort to depreciated paper money as a means for financing the Revolution, we can pause to inquire how far it was justified by those results. It has sometimes been said that, since the government was weak and the people were unwilling to submit to adequate taxation, paper money was the best device available and therefore justifiable. But to accept such reasoning is to assume an attitude toward such problems that is fatalistic and subversive of human progress. To say that, because people are ignorant, short-sighted, or foolish, they will do unwise things may be an explanation of their action, but hardly justifies their remaining content in their ignorance.

The issue of paper money together with the expedients that accompanied it during the Revolution in many ways increased the difficulties

that confronted the government in securing supplies for the army and seriously disorganized the economic life of the country, not to mention the hardships and injustice it inflicted on many people, and it did not enable the country as a whole to escape taxation. Had the people foreseen the evils that followed in its train and realized that taxation in one form or another could not be escaped they, had they been wise, would have gladly submitted to regular forms of taxation, in greater amounts, so as to lessen, if they could not altogether escape, the evils of a depreciated currency. This is one of the lessons of economic history which, as the events of the World War indicate, has not yet been thoroughly learned.

The End of the War. Practically the war came to an end after the surrender of Cornwallis' army at Yorktown in 1781. In England the growing opposition to the increasingly burdensome war led to a Parliamentary defeat of the Tory party, which had supported the policy of the king, and a Whig ministry came into power determined to arrange a peace. It was not until November, 1782, that provisional terms of peace were agreed upon and nearly a year later that the final treaty was signed. The terms of peace granted independence and, by making the Mississippi River the western boundary, secured to the country the region beyond the Alleghenies. The Floridas were turned back to Spain. The navigation of the Mississippi was made free but, as Spain controlled both banks at the southern end of the river, this later proved a source of difficulty. There were no provisions for a treaty of commerce, though the United States secured valuable fishing rights off the coast of Newfoundland and in the Gulf of St. Lawrence. It was also agreed that nothing should be done to obstruct the collection of debts contracted before the war, and that Congress would recommend to the states the restoration of loyalist property that had been confiscated.

The total direct cost of the war to the United States has been estimated at from \$100 million to \$140 million in specie value, a sum which in those days seemed very large, though before the end of the first World War this country was spending an even larger amount every two days. In addition it was estimated that France had spent some \$60 million for and in America directly and nearly \$250 million in all, and the debt of Great Britain was increased by over \$500 million. Having attained political independence at this heavy cost, to say nothing of the indirect cost involved, it remained to be seen how far this new won freedom would prove to be of advantage to the country. In the period that followed the economic problems facing the people centered about the readjustment of their economic life to the conditions that existed under political independence in a time of peace, and the organization of a form of government suitable for promoting the economic and social development of the country under such conditions.

CHAPTER XIII

ECONOMIC CONDITIONS UNDER THE CONFEDERATION AND THE ADOPTION OF THE CONSTITUTION, 1783-1789

The Outstanding Economic Problems of the Period. The years from 1783 to 1789 under the Confederation are frequently spoken of as the critical period in our history. It was a period during which the great question at issue was whether the particular economic or political interests of the different states and the general spirit of individualism would so undermine the power of the central government that the country would degenerate into a weak and impotent confederacy of independent sovereign states; or whether, through a spirit of cooperation and mutual sacrifice of special interests, furthered by a vision of the greater gain that eventually might accrue to all, they could overcome these disintegrating tendencies and unite in establishing a central government sufficiently strong to promote the general well-being and to command the respect of the world. The importance of the actual outcome for the future economic development of the country can scarcely be exaggerated; yet the issue often appeared to be hanging in the balance. In the final decision economic conditions and forces played a vital part and an understanding of them is thus essential, for it may be said that there is scarcely another such brief period of peace in our history when the interaction of current economic and political conditions was more charged with portentous significance for the future of the country.

On the side of the economic life there were two outstanding problems which mark the period. One was the necessity for readjusting the economic life to more normal peacetime conditions. This problem is a part of the aftermath of any serious and protracted war and must be reckoned among the economic disturbances and losses arising from war. Although it has been said that in the case of the Revolution the nature of the economic organization of the country was such that the disorganization was not so great as it would otherwise have been, it is also to be borne in mind that the economic readjustments necessary after the war were further complicated by the fact that political independence had been attained. Though there is danger of exaggerating the economic effects of political independence, these somewhat increased the difficulties of readjustment. The second problem included (1) the establishment of a form of govern-

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ment that would, among other things, promote the economic development of the country and (2) the enactment of suitable legislation for furthering similar ends. The difficult conditions under which these problems had to be worked out and the way in which they helped to shape the outcome, we shall now examine. But as a preliminary step some general changes wrought by the Revolution require notice.

Some General Changes of the Revolutionary Period. When in March, 1781, the last state, Maryland, signed the Articles of Confederation, they finally went into effect, creating a "perpetual union" and "league of friendship" between the thirteen states. Under these Articles each state was given one vote in Congress, the vote of nine states was necessary on many important matters, and any amendment of the Articles required unanimous action. The most serious defects in these Articles arose from the fact that Congress had no power to levy taxes or to regulate and control commerce. The delay in ratification had been due largely to the smaller states' fear of the growing power of those states that had extensive claims to western lands. To quiet this fear, the states having such claims finally agreed to turn them all over to the central government, reserving only the right to dispose of a few small sections. The actual carrying out of these cessions was slow; but by 1786 all states except North Carolina, South Carolina, and Georgia had acted. Georgia delayed until 1802. Thus was established the national domain which was expected to prove a most valuable asset to the central government and, by giving the states a greater interest in that government, further to strengthen it through the development of a greater spirit of nationality.

Meanwhile the various states, except Rhode Island and Connecticut which continued under their old charters, were engaged in drawing up new constitutions and passing new laws, most of which, through reflecting the spirit that underlay the Revolution, showed a marked tendency toward greater individual freedom and a more democratic form of government. The new constitutions vested more power than before in popularly elected branches of the government and granted representation more nearly proportionate to the population in districts that had not been able to secure such representation in some colonies before the Revolution. Several states shifted their capitals to points in the interior partly to escape influences dominant at the commercial seaports. Although the franchise was broadened, property qualifications were generally retained and Catholics and Jews were excluded. In most of the states where the Church had been supported by public taxes it was disestablished and eventually a complete separation of church and state followed, along with freedom of religious worship. The lands, ultimate title to which had formerly been vested in the crown or a proprietor, were taken over by the different states; all quitrents were abolished as well as the system of

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primogeniture and entail, as being undemocratic in character. There was also a strong movement in favor of the abolition of slavery; and in New England, but not until later in the middle states, measures were taken which either immediately or eventually put an end to that institution.

In this connection too it should be noted that the events of the Revolutionary period had wrought very extensive changes in the distribution of wealth. Between the effects of the depreciation of the currency, the wartime reactions upon various lines of business, and the losses suffered by the Tories, many people of wealth lost heavily while others acquired riches. This resulted in a considerable shift in the economic status of many individuals—a common phenomenon of prolonged war. A New York loyalist complained that, “Those who five years ago were the ‘meaner people,’ are now, by a strange revolution, become almost the only men of power, riches and influence . . . ” and a Bostonian spoke of the social revolution as being as remarkable as the political revolution. Through these various lines of action accompanying the Revolutionary movement the people attained a greater degree of economic as well as political freedom and democracy.

Economic Changes Following Independence and the Return of Peace. To understand the immediate course of events in the economic life of the country in the years 1783–1789, it is essential to realize the changes wrought by the return of peace. The most important effects arose from two sources. The first was the fall in prices and the subsequent general business depression that resulted from the disappearance of the inflated paper money and the loss of the abnormal wartime demand for goods. In part, however, this depression was due to the second great change: the difficulties that confronted foreign commerce when the country became politically independent and thus was placed outside of the mercantile system of the British Empire with which most of its trade had been carried on; that commerce now found itself face to face with many new restrictions.

That a period of extensive readjustment and business depression is apt to be a part of the aftermath of any serious and prolonged war is one of the lessons abundantly evidenced by economic history, and the history of the United States affords no exception to the general rule. In so far as the drop in prices incident to the disappearance of depreciated paper money played a part in the depression, it was beginning to be felt by 1781 when that money practically ceased to circulate and specie, large quantities of which had been brought in by the British and French military forces, began to be used once more. The full effects of this change took several years to work themselves out. The debtor classes were particularly hard hit where they had borrowed money when prices and wages were high and then had to face the prospect of trying to pay

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their debts when the price level had fallen. Thus a person who had gone into debt when his paper money wages were between \$10 and \$20 a day saw no prospect of ever paying off the debt after wages had fallen back to 50 cents a day. Such conditions naturally soon led to the widespread demand for a reduction or cancellation of debts. In addition to these depressing effects there was the loss of the abnormal wartime demand for many goods together with the unusual opportunities for making profits which that period had afforded.

Finally, the return to peace let in a flood of imports, notably those of British manufactures, which further depressed prices, drew specie out of the country, and threatened to exterminate many of the new manufacturing industries that had developed during the war. The export trade found that the few new opportunities opened to it did not immediately offset the loss of many special advantages enjoyed in British markets during the colonial period. Such were the chief influences responsible for the general economic depression that soon spread over the country when the war came to an end. Its effects seem to have been most acutely felt about 1785-1786, though prices continued to decline until 1789; but, as the processes of readjustment were carried through and foreign commerce slowly revived, the general situation showed a marked improvement after 1787.

Foreign Commerce. The readjustment in commerce involved in the return of peace has been named as the second important change that affected economic conditions during this period. Apparently the people had expected that on attaining political independence they would continue to enjoy all the advantages and privileges that they had had as British colonies and, at the same time, be free of all the restrictions previously imposed upon their commerce, or at any rate that European countries would be so eager to secure their profitable trade that they would actively compete with one another in offering valuable concessions and privileges. Underneath all this, was the general feeling that commerce was something that legislative enactments could rather easily control and so divert from one nation to another; a belief by no means uncommon today and serving as one of the many illustrations of the popular tendency to exaggerate the power of legislation over a country's economic development. This delusion was destined quickly to be dispelled.

In the first place, there was no such eagerness shown on the part of European countries to make concessions for the trade of the United States as had been expected. France and Spain now withdrew many of the favors accorded during the war and reverted to the old exclusive mercantile policy that had previously prevailed. One important concession was made by France in 1784 when the chief ports in her West Indian colonies were opened to American goods, salt pork excepted, brought in

American ships; but only molasses and rum could be taken away and the duties imposed proved rather burdensome. Spain gave greater freedom in the trade with Havana, but the ports of the Danish and Dutch West Indies remained unrestricted. New commercial treaties were entered into with Holland, Prussia, and Sweden; but Congress, as it had no power to regulate the commerce of the states, could offer little, and hence could obtain little, in the way of concessions.

Far more important, however, was the attitude of Great Britain, for it was with that country and her possessions that the colonies had always carried on most of their trade. When the question came up in Parliament, there were some advocates who favored concessions to the United States to make sure of retaining the profitable trade of the country; others insisted that no concessions were necessary since the economic conditions were such that the United States would find it most advantageous to trade with Great Britain in any case, an argument which, when this line of action was adopted, subsequently proved substantially correct.

The old Navigation Laws were, therefore, put into force against American trade and shipping subject to such modifications and changes as the king in council might from time to time authorize. One of the most important restrictions resulting was that trade between the British West Indies and the United States was confined to British ships, a serious blow at the carrying trade; and the importation of any American salted meats and fish into the islands was prohibited, though the importation of American lumber and breadstuffs, when brought in British ships, was allowed. The shipbuilding industry also suffered in that American-built ships were no longer admitted to British registry and thus lost an important market. In the direct trade with Great Britain, on the other hand, some valuable concessions were obtained. American ships were allowed to bring American goods and such goods were not subject to the additional duty imposed when brought in foreign ships. Furthermore, manufactured products, fish oil and whale products excepted, together with iron, naval stores, indigo, etc. were admitted without paying any higher duty than was paid on similar products from British possessions, and tobacco and rice, destined for reexport, and wood were admitted free.

In the absence of satisfactory statistics it is only possible to state in general terms the changes that took place in the export trade of the country during these years. In the case of the exports to Great Britain official figures are available and indicate that the average annual value for the years 1784-1789 was about £900,000 or barely half the average for the six years preceding the Revolution. In part this loss was offset by some increase in the trade direct with the Continent. It was during these years, too, that the New England merchants first began to send their

ships to China and develop a trade that soon proved extremely profitable, though for the time being it remained small in volume.

Apparently there was a heavy loss in the West Indian trade during the years immediately following the return of peace. In the case of the British islands the restrictions imposed, though often evaded, made this a permanent loss; but it would appear to have been offset by the later growth in the trade with the rest of these islands so that by the end of the period the total volume was about what it had been before the Revolution. However, the lucrative business of supplying the West Indies with African slaves was lost. The New England fisheries that had suffered so during the war were gradually built up once more and, in spite of the British restrictions, appear to have regained their former size by the end of the period, thus contributing to the returning prosperity that was then in evidence.

In the import trade the attainment of political independence necessitated fewer readjustments than in the case of exports. The chief change that followed freedom from the restrictions of the English Navigation Laws was some increase in imports direct from the Continent and from the non-British West Indies. The imports from Great Britain continued almost as great in amount as before the Revolution, the annual average of the official value for the six years 1784-1789 being £2,333,643, a decrease of about one-seventh from the average of the six years ending in 1774.

Importations from Great Britain were particularly large in the two years immediately following the return of peace, partly because of the depleted stock of goods on hand and partly due to the desire of British manufacturers and traders to sell their accumulated supplies, check the growth of American manufactures, and regain their old market. The immediate result of this heavy importation was to glut the market, depress prices, drain the country of about £1,500,000 in specie sent to England in payment, and thus in various ways to increase the general depression in business. It was these difficulties combined with the hope of forcing further concessions from other countries and the need for revenue that led to various attempts to regulate trade at this period.

The Regulation of Commerce. One of the proximate causes of the Revolution had been the desire of the colonies to free themselves from the regulation and taxation of their trade by Great Britain. Furthermore, there was evident at this period a growing reaction against the extremes of regulation that had developed under the Mercantile System in Europe. In France a group of writers known as Physiocrats had begun to argue that greater freedom of trade, by furthering division of labor and territorial specialization in industry, would promote the growth of a nation's wealth and Adam Smith's epoch-making book, "An Inquiry

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into the *Nature and Causes of the Wealth of Nations*," published in England in 1776, based on similar arguments, was essentially a protest against mercantilism. Thus it happened that at the time when the country attained political independence its leading statesmen, Alexander Hamilton excepted, were inclined to favor substantial freedom of trade.

During the colonial period the desire for protection had played little part in shaping the commercial policy of the different colonies, the need for revenue being the dominant consideration, and during the Revolution the different states made little effort to collect customs duties. With the return of peace there soon developed a movement leading to new customs duties and efforts to regulate commerce. At first practically all the states imposed import duties primarily for the sake of revenue, following the colonial precedent. But beginning in 1784 a change in attitude is noticeable; the heavy importation of British manufactures, the general depression, and the failure to secure the hoped-for trade concessions from other countries led to a reaction against the policy of duties for revenue only and a demand for duties that would provide protection and also might be used to force concessions from other countries. Massachusetts led the way by increasing her import duties in 1784, raising them still higher the next year, and in 1786 actually prohibiting the importation of a considerable list of commodities. New York and Pennsylvania together with some of the smaller states increased their import duties about the same time; the three southernmost states, having few manufactures, were content with revenue duties; New Jersey and Delaware, not being commercial states, took little interest in duties generally. After the Revolution Maryland, Virginia, and Georgia, for the sake of the revenue, also reverted to levying a few export duties, that on tobacco being the most important.

At this time, too, Congress under a resolution of 1784 made another attempt to get the states to allow it to prohibit for 15 years the importation or exportation of goods at American ports except in vessels owned by people of the United States or by subjects of foreign powers having treaties of commerce with the United States. The object of this proposal was the adoption of retaliatory measures such as would force commercial concessions from other countries, Great Britain in particular. As it was found impossible to get the necessary consent of the states, the plan had to be abandoned.

Even more protective in character than the import duties was the series of acts passed in most of the states designed to aid the shipbuilding industry and the American merchant marine which after the Revolution felt the restrictions of the British Navigation Laws all the more because they had benefited by those laws in the colonial period. These acts generally took the form of higher duties on goods imported in foreign

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vessels than on those imported in American vessels or on those imported in vessels of a country having a treaty of commerce with the United States. Also foreign vessels were generally subject to higher tonnage duties. It is to be noted, moreover, that these discriminatory duties on shipping imposed by the different states seldom applied to the shipping of the other states; in the case of the general duties on commodities they applied to foreign goods—only occasionally to American goods—imported from other states as well as to those coming direct from foreign countries. This last was a constant source of friction and dispute between the different states and reflected one of the serious elements of weakness in the Confederation.

Agriculture and Manufactures. The difficulties incident to readjustment to peacetime conditions under political independence which have just been described largely explain the situation as regards general economic conditions that prevailed in the country during the trying years between 1783 and 1789. Agriculture, the main pursuit of nearly 90 per cent of the population, was affected by these conditions chiefly through the decline in prices of its products resulting from the loss of the abnormal wartime demand, new restrictions in foreign markets, and the rise in value of the circulating medium. Still, the depressing effects of these influences were greatly modified by the prevalent local economy that characterized this business—the same reason that lessened its losses during the preceding period of war—so that agriculture suffered less during these years than most other branches of industry. Furthermore, in the case of the Southern plantation region, where agriculture was more essentially commercial in character in that it specialized in growing staple crops chiefly for export, the return of peace in some ways improved the export market, though many plantation owners found difficulty in replacing the slaves lost during the war.

Manufacturing industries, chiefly those that had been established to supply army needs or the lack of foreign goods during the war, experienced far greater hardships. The heavy importations of British goods, often sold at very low prices, fell with crushing weight upon these infant establishments unaccustomed to facing severe competition, and many were ruined. This reaction in manufacturing has been an accompaniment of the aftermath of every great war in the history of the country and has always resulted in a demand for aid and further protection. That some effort was made to give further protection through higher customs duties, though of an extremely moderate character, generally ranging from 5 to 15 per cent, has already been seen; but there were numerous other methods used to provide additional assistance. These generally took the form of bounties or exemptions from taxation, and from 1785 measures of this sort became fairly common.

Paper Money Issues. The economic depression of this period was most severely felt in the years 1785 and 1786 and, as usual, caused widespread discontent and led to demands for various measures designed to afford relief. Some of these measures have already been described, but the one that proved the most popular and was most urgently advocated was the familiar panacea—cheap money in the form of new paper issues. The need for revenue to pay expenses and interest on the heavy debts combined with the dislike of taxation was one motive for the issues that followed; but the popular clamor was primarily due to the desire of debtors to get money to pay their debts. Many of the issues were put out as loans to meet this need. At the same time there was a demand for legislation to postpone the payment of debts or even to cancel them.

Outside of New England only Delaware, Maryland, and Virginia were able to withstand the demand for paper money, and the issues soon depreciated in value. Although Rhode Island was the only New England state to resort to this device, it indulged in the worst abuses. Those people refusing to accept the paper were subject to heavy fines and the loss of their rights as freemen; as a result shops were closed, farmers refused to bring their produce to the cities, and creditors fled from their debtors for fear of being paid in depreciated paper. To cap the climax the judges, who refused to uphold the law, were summoned before the legislature and denounced for their decision. Eventually the legislature came to its senses and repealed the forcing act, the people meanwhile having disapproved of a still more severe measure submitted to them for decision. In New Hampshire the legislature that refused to authorize paper money was threatened by a mob; in Massachusetts the paper-money party broke out in open violence in what is known as Shays' Rebellion, which necessitated the raising of an army of some 4,000 troops to suppress it.

This paper-money agitation, which found its strongest support among the poorer classes, particularly the debtor farmers, was but a reflection of the general restlessness, the desire for freedom and equality, and the opposition to all political and social restraints that accompanied the Revolutionary movement. However, it threatened to undermine some of the most fundamental institutions upon which the existing economic order was based.

The Finances of the Confederation. Meanwhile Congress was struggling with the question of the Confederation's finances, and conditions were going from bad to worse. In February, 1781, before the war was over, Congress had asked the states to give it power to impose a customs duty of 5 per cent on most imports in order to obtain badly needed revenue. Within a year all the states but Rhode Island had consented; but that individualistic state was afraid this would injure her commerce, endanger the liberties of her people, and tend to make Congress independent of the

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states; so she refused her consent and, as unanimous approval was necessary, the plan failed. In 1783 Congress made a second request of a similar character and after waiting for three years the approval of every state but New York was obtained, though subject to varying conditions. New York refused even to consider the matter and again the proposal failed through the petty fears and jealousies of the time. How far the people were willing to go in this attitude is shown in the culminating disgrace of the period when in 1783 a small body of soldiers, made mutinous from lack of pay, so threatened the impotent Congress that it fled from Philadelphia, where scarcely a hand was lifted to protect it.

In the years from 1784 to 1789 the condition of the Confederation's finances went from bad to worse. The chief source of income was the requisitions made upon the states, which yielded about \$2,000,000, specie value, and a slightly larger amount received in the form of indents and used to pay interest on the debt. From the sale of public lands, under legislation enacted at this time which will be described in a later chapter, nearly \$1,000,000 was obtained and used to reduce the public debt, and something over \$300,000, specie value, came from miscellaneous sources. In addition it was found necessary to borrow money abroad, and loans of nearly \$2,300,000 were obtained in Holland.

These receipts were totally inadequate to meet the needs of the government, including interest on the domestic and foreign debt; in consequence the arrears of unpaid interest increased between 1784 and 1789 inclusive by about \$8,500,000 in the case of the domestic debt and by nearly \$1,600,000 in the case of the foreign debt. Obviously such conditions meant that the Confederation was headed towards bankruptcy and its continued existence would necessitate an immediate and drastic reform in its finances such as might enable it to obtain a revenue sufficient to meet its obligations. This weakness was the second outstanding defect in the existing government and, together with the lack of control over domestic and foreign commerce, exercised a vital influence in creating the demand for a change in the Articles of Confederation.

The Movement for the Constitutional Convention. Almost from the moment of adoption of the Articles of Confederation a realization of their weakness had brought forth various proposals for strengthening the government, but all had failed to produce results, owing either to the inertness of Congress or to the petty jealousies and fears of the different states. The situation of the Confederation was indeed desperate and its continued existence under what was merely a farce of a government was impossible; and the wrangling states, still self-centered and provincial in their outlook, were resorting to measures of discrimination against one another almost as severe as those adopted against foreign countries. Well might Washington say,

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Experience has taught us that men will not adopt and carry into execution measures the best calculated for their own good, without the intervention of a coercive power. I do not conceive we can exist long as a nation without having lodged somewhere a power, which will pervade the whole Union in as energetic a manner as the authority of the state governments extends over the several states.

Immediately, the movement which led up to the calling of the Constitutional Convention of 1787 had its origin in the difficulties arising from lack of more centralized control over commerce. Difficulties had existed for some time between Maryland and Virginia in controlling the commerce and navigation of the Potomac River and Chesapeake Bay which finally, in 1785, led to a meeting of commissioners from the two states who drew up an agreement. It was then proposed to extend the plan and all the states were invited to send delegates to a convention to be held at Annapolis in September, 1786. When that time came only five states were represented by delegates in attendance and, as nothing worth while could be accomplished, it was decided to call another convention to meet at Philadelphia in May, 1787, "to take into consideration the situation of the United States, to devise such further provisions as shall appear to them necessary to render the constitution of the federal government adequate to the exigencies of the Union . . . " This helped to galvanize the weak Congress, which was at times without a quorum for weeks together, into enough life to issue its own call for a convention to meet at the same time and place for the purpose of revising the Articles of Confederation by such changes as should "render the federal constitution adequate to the exigencies of government and the preservation of the union."

Among the motives and forces back of the movement which led to the gathering of the Constitutional Convention of 1787 those of an economic character played an extremely important part, though of course they were often closely bound up with political considerations as well. Although not all the economic ills from which the country suffered in the years from 1783 to 1787 were to be attributed to the form of government, it was in some ways fortunate that the economic depression of the time came when it did, for it undoubtedly gave a stimulus to the demand for a stronger government at a most critical period. It was also obvious that a stronger central government could in numerous ways greatly promote the economic development of the nation. Under the Confederation the evident tendencies to abuse liberty until it degenerated into license and to foster individualism until it threatened anarchy were undermining the very foundations upon which the existing economic order had been built up. More specifically it was clear that a stronger central government could promote commerce, protect the infant manufacturing industries, further the opening up and settlement of the western lands, better protect prop-

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erty rights in slaves, restore the vanishing credit of the government, thus also benefiting the government's creditors, and in general establish those conditions of law and order essential for the protection of private property and the maintenance of social stability. The movement for the Constitution, therefore, was most actively supported by those groups, such as traders, manufacturers, slave owners, government creditors, and those interested in western lands, who believed a stronger central government desirable because it would promote either their own pecuniary interests or the general welfare or both. Which motives actually dominated the Framers is a question upon which very divergent views have been expressed, despite the lack of any appreciable direct evidence; but, if one agrees that the resulting framework of government was in general harmony with the best interests of the country as seen at the time, he can hardly hold that those favoring the Constitution, whatever their personal interests, should have acted otherwise than they did.

Although the movement represented a reaction, most marked in the case of the more conservative, property-owning classes, against the extreme demands for freedom and local autonomy which reflected the revolutionary spirit, it must also be recognized as progressive in character. It was progressive because the greater power and centralization of control in government which the Constitution provided were directly in line with the needs of the existing economic order and also with the needs that were destined to grow as that economic order subsequently evolved. The really essential, and most of the more important, needs of the time were met by this framework of government, which contained sufficient elements of elasticity so that it has continued to serve, even if not perfectly, the needs of succeeding generations down to this day.

The Constitutional Convention. The convention which assembled at Philadelphia in May, 1787, and lasted until the middle of September included delegates from all the states but Rhode Island and numbered among its members most of the ablest statesmen of the country. The group was marked by its eminent common sense and practicality; after all, not abstract political theories but very practical considerations dominated its deliberations and shaped its conclusions. "The specific task of the convention was to remedy a series of perfectly definite defects revealed in the experience of the ten years preceding." Yet its problem was not only to suggest remedies but to suggest remedies that would meet with such general acceptance that they would be adopted; for, failing that, their labors would be futile.

To do this was exceedingly difficult, for there were many divergent opinions and conflicting interests to be reconciled. The small states feared the power of the large states; the commercial and shipping interests might run counter to the interests of the small farming and plantation classes;

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the slaveholders and non-slaveholders, the debtors and creditors, the poor and the rich, each saw visions of possible dangers against which they must be protected if their approval was to be obtained. Under any conditions such problems are difficult of solution; but they were rendered doubly difficult at the time when the whole economic, political, and social organization of the country was so essentially provincial and decentralized that the ties of common interests binding all the group together were far less numerous and important than they have become today. Under such circumstances a clear vision of future developments, a tolerant attitude of compromise, and a spirit of self-sacrifice for the common good were vital to success. That in the end such traits dominated meant more for the ultimate welfare of the country than can well be described.

Economic Aspects of the Constitution. Any form of government must be in part shaped by economic considerations, since the state performs many important economic functions and, in order to perform these functions properly, its powers and duties must be determined with reference to the character of the prevailing economic order. Furthermore, since the failure of the Articles of Confederation arose in no small measure from the lack of power to function effectively in promoting the economic development of the country, it was natural that the changes made under the new Constitution should be considerably influenced by economic considerations. As Madison himself wrote in *The Federalist*,

The diversity in the faculties of men, from which the rights of property originate, is not less an insuperable obstacle to a uniformity of interests. The protection of these faculties is the first object of government. . . . A landed interest, a manufacturing interest, a mercantile interest, a moneyed interest, with many lesser interests, grow up of necessity in civilized nations and divide them into different classes, actuated by different sentiments and views. The regulation of these various and interfering interests forms the principal task of modern legislation and involves the spirit of party and faction in the necessary and ordinary operations of the government.

Hence some analysis of the specific provisions of the Constitution, as far as they were shaped by economic considerations, is desirable, partly because, as illustrating the interaction between economic and political institutions, this is essential to an understanding of our Constitution, and partly because that Constitution was an extremely important factor in the later economic development of the country. Although it is impossible in such an analysis sharply to separate the economic from the political or other influences that helped to mold our frame of government, it will be found that the economic conditions and experiences of colonial times as well as those of the Confederation, together with the conflicting economic interests of the period, all were very influential factors in shaping the Constitution under which we now live.

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First, we may take up the provisions of the Constitution most directly and obviously having to do with the economic life of the country. Lack of control over commerce had been one of the most serious weaknesses of the Confederation; this was now remedied by giving Congress the power "to regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes." At the same time "no Preference shall be given by any Regulation of Commerce or Revenue to the Ports of one State over those of another; nor shall Vessels bound to, or from, one State be obliged to enter, clear, or pay Duties in another"; and the states were prohibited, without the consent of Congress, from levying duties on imports or exports, except where absolutely necessary for executing their inspection laws, and from levying tonnage duties. Thus were eliminated the state restrictions on interstate and foreign commerce which had previously been a constant cause of friction and a serious check upon trade.

Under the taxing powers Congress was given the right, previously so frequently sought in vain, to levy import duties, provided they were uniform throughout the country, but was prohibited from levying any export duty or tax. This prohibition was due chiefly to the fear on the part of the Southern states, particularly those growing tobacco, which had previously made the chief use of this device, that such duties would be imposed on their products. It was also provided that the importation of slaves was not to be prohibited before 1808; in the meantime no duty exceeding \$10 a person was to be imposed on their importation. This clause was designed to protect the planters of South Carolina and Georgia chiefly interested in growing rice and indigo, for by this period the tobacco planters were becoming dubious as to the advantages of slave labor. Further provisions affecting commerce gave Congress power to establish post offices and post roads, to fix the standard of weights and measures, and to establish uniform laws on bankruptcies.

Lack of taxing power had been the other most serious defect of the Articles of Confederation. To remedy this Congress was now given power not only to borrow money but "to lay and collect Taxes, Duties, Imposts and Excises, to pay the Debts and provide for the common Defense and general Welfare of the United States, but all Duties, Imposts and Excises shall be uniform throughout the United States." All direct taxes were to be levied in proportion to the population according to the census enumeration, but excluding untaxed Indians and counting slaves at three-fifths of their number, the same basis upon which representation in the House was proportioned. The choice of population as the basis for apportioning direct taxes was in the interest of the agricultural class which feared that any other basis, such as wealth, would chiefly fall on those having landed property; there was also the additional administrative reason that popu-

lation could be more accurately determined. It was further provided that all bills for raising revenue must originate in the House of Representatives, though the Senate could propose amendments, apparently with the idea that this would give the branch of Congress most closely in touch with the people greater influence in shaping the revenue laws. The power to levy taxes was of course the basis for the maintenance of the government's credit but this was also strengthened by providing that "all Debts contracted and Engagements entered into, before the adoption of this Constitution, shall be as valid against the United States under this Constitution, as under the Confederation."

The unsatisfactory state of the circulating medium, particularly the issue of paper money by the states, had not only hindered trade but all financial transactions, in colonial times as well as under the Confederation. Now Congress was given sole power to coin money, regulate its value, and punish counterfeiters. The states were prohibited from coining money, emitting bills of credit, or making anything but gold and silver coin a legal tender in payment of debts. Congress was not specifically given power to issue paper money, a proposal to that effect having been defeated. Whether the convention members thought that this power had not been granted or that it was implied in other powers, as was eventually held by the Supreme Court in the case of the Civil War greenbacks, is not altogether clear. Undoubtedly it was hoped and supposed that the iniquitous state issues had been eliminated; but, in an indirect way through the charter of state banks with the power of note issue, they later returned to plague the country.

Property rights were protected by various provisions. Some related to specific forms of property: fugitive slaves were not to be freed on escaping to a free state but on claim delivered to their owner; copyright and patent laws were authorized to promote literature, science, and the useful arts; no state could pass a law impairing the obligation of contracts; and Congress received the power to dispose of and make all needful rules and regulations respecting the territory or other property of the United States. Other provisions were of a more general character such as those for courts, the army and navy, and protection against piracy. Citizens of each state should be entitled to all the privileges and immunities of citizens in the several states.

Finally, without stopping to point out some of the minor economic influences on other provisions, there should be noted certain outstanding features of the general frame of government which were in part determined by economic forces. (1) The fear of the small states lest their economic interests and general liberties should be endangered by the larger states was met by the compromise under which each state secured equal representation in the Senate while population was the basis of representation in the House. (2) The Federal government was granted only such

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powers as were specifically or impliedly delegated to it or denied to the states and all other powers remained to the states or the people. Though this provision was only specifically included among the first group of amendments, partly as a matter of caution, its spirit underlay the original Constitution. The provincialism, economic, political, and social, and the strong spirit of liberty inherited from colonial times led the states to refuse to grant to the Federal government any power beyond that which previous experience had shown was absolutely necessary for the common good.

(3) The whole framework of the government with its division of functions between the legislative, the executive, and the judicial branches, combined with the elaborately worked out system of checks and balances, including the written Constitution at the top interpreted by the Supreme Court; the powers of the President and the method for electing him; the arrangement of the terms of office and methods for electing Senators and Representatives; the powers of impeachment and removal of officers; and the cautious provision for amendments to the Constitution—all these and other provisions, though based in part on the political institutions of colonial times, reflected a fear of the power of majorities and a desire to protect minority interests of any sort from their tyranny, a danger which the experiences of the Confederation had made appear very real. The result was a government where radical changes, although always possible if a sufficiently large number was convinced of their desirability, still were likely to come slowly and after much discussion; a government less quickly responsive to the momentary whims of the populace but more stable in its forward movements.

Nothing affords better testimony to the foresight and wisdom of the men who drew up this frame of government than the fact that it has survived with so few amendments to the present time in spite of the revolutionary changes that have taken place in the economic and social life of the nation. Drawn up over 150 years ago, when the subsequent growth of the country and its present economic organization were undreamed of, it still serves, aided by a broadening interpretation of the powers of the Federal government on the part of the Supreme Court, as the framework of our government. That under these changed conditions it should function to perfection is not to be expected; how far it falls short of being wholly adapted to our present economic order is an interesting question for our subsequent study; but the surprising thing is that, considering the period and the conditions under which it was drawn up, this bundle of compromises "extorted from the grinding necessity of a reluctant nation," as John Quincy Adams later characterized its origin, still works as well as it does.

The Ratification of the Constitution. The arduous work of the convention was completed in September, 1787, after providing that the question of the ratification of the Constitution should be left to special conventions

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called by the different states and that the approval of nine should be sufficient for its adoption, thus ignoring the provision of the Articles of Confederation requiring unanimous approval of any amendment. That the approval of even this number could be obtained was by no means certain. The discussions and political maneuvering that followed reflected the same divergence of economic and other interests that had been so prominent before. It has been estimated by Beard that about one-third of the adult males were disfranchised and that probably only about one-fourth or one-fifth actually took part in the election of delegates to the state conventions, possibly 160,000 in all, out of which number about 100,000 appear to have favored ratification.

The study by Libby brings out in a striking manner the sectional and class interests that were aligned on the two sides of the question. The seaboard sections, especially the centers of wealth, trade, commerce, and manufactures, together with the tidewater plantation region and a small section of the more densely settled portions of Kentucky and Tennessee interested in western lands and in trade down the Mississippi, generally favored ratification. On the other hand, the less densely settled rural sections occupied by the relatively self-sufficing farming class and the regions where the paper-money party had been strong were for the most part opposed. But even along the coast region and in the cities there were not lacking influential men who feared the powers granted the central government and took their stand with the opposition.

In spite of the fact that the opposition was relatively unorganized and scattered as compared with the groups favoring ratification, it required much argument and careful political maneuvering on the part of the latter to accomplish their purpose. Ratification by the ninth state, New Hampshire, came in June, 1788; that of Virginia followed in the same month by a close vote; New York, where at the start two-thirds of the delegates were opposed, swung into line in the summer by a vote of 30 against 27. Success was thus assured, though North Carolina and Rhode Island still held out; and in September Congress resolved that the Constitution had been ratified and that the new government should go into effect in March, 1789. North Carolina finally ratified towards the end of 1789 and obstreperous Rhode Island, seeing that she could not successfully obstruct as on previous occasions and fearing that to be left out would prove more disastrous than the endangering of her precious liberties if she joined, finally approved in May, 1790.

However, in order to meet the demand for a Bill of Rights and the generally expressed wish for various amendments further to safeguard the people's liberties which had developed in the discussion over ratification, the first ten amendments were drawn up, proposed to the states in

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September, 1789, and declared ratified in December, 1791—a final concession to that all-pervading spirit of freedom and liberty.

Thus the new government began its existence at a favorable moment, for the disappearance of the business depression and the rise in prices after 1789 did much to allay popular discontent and secure added support for the Constitution. Yet the old local jealousies and spirit of individualism still remained to vex the nation. In the decades that followed diverging economic interests and the spirit of states' rights still gave rise to threats of secession in different sections. For, whatever may have been the theory of the Constitution—and the statesmen themselves were not agreed upon the point—the question whether it had created an indissoluble Union was not finally settled without an appeal to arms and the arbitrament of war. A slower factor in development, though more potent in furthering the ultimate general acceptance of this decision of war, was the steadily growing economic interdependence of the different sections which, in the course of the following century through the growth of a national economy and the rapid increase in the number of ties of common interests, bound the different sections together so that that Union became a Union in spirit as well as in form.

CHAPTER XIV

ECONOMIC CONDITIONS UNDER THE NEW GOVERNMENT AND WAR'S REACTIONS, 1789-1815

The Chief Characteristics of the Period. Though the crisis had been passed with the attainment of independence and the adoption of the Constitution, the quarter-century that followed was destined to prove a trying one for a country and a government that were both new. For not only were there the problems of putting the new government on its feet and furthering the economic development of the nation, problems which under the most favorable conditions presented many difficulties, but these were further complicated by the outbreak of the protracted wars into which all of Europe was plunged, resulting in important reactions upon the course of both economic and political events in the United States and eventually drawing this country also into war.

These wars, therefore, brought into the period an abnormal element to complicate the situation, and in order to untangle and understand the dominant factors which shaped the economic history of this quarter-century it is essential to bear in mind these two separate groups of forces: (1) the abnormal influences arising out of wars and (2) the changes incident to the establishment of the new government and the furthering of the country's economic development along more normal lines of growth. In the following account the reactions of the European wars will be described first, as helping to explain some features in the record of the more normal course of developments that follows, and conditions during the War of 1812 will be treated separately.

The Reaction of European Wars upon Foreign Commerce to 1812. In 1789 the French Revolution broke out. The succeeding events in 1792 drew France into a war with her neighbors which soon involved the whole of Europe and continued almost without interruption until the final downfall of Napoleon at Waterloo in 1815. The effects of these wars up to 1812, as far as the economic life of the United States was concerned, were chiefly felt in the fields of foreign trade and shipping and in the resulting changes in the demand for the products of the country's agriculture and manufactures. These wars made the United States the chief neutral carrier of the world and gave a tremendous stimulus to the ship-building industry and the merchant marine; at the same time they con-

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siderably increased the demand for American foodstuffs. Under these conditions, as is shown by the chart on this page, the total exports of the country rose from \$20 million in 1790 to over \$108 million in 1807, though in part this increase reflected only a rising price level. Although practically all these exports were domestic products in 1790, almost \$60 million of the 1807 total consisted of reexports of goods imported from other countries; a result of the fact that many products of foreign, especially West Indian, origin and destined for foreign ports were being carried by way of United States ports to take advantage of this country's position of neu-

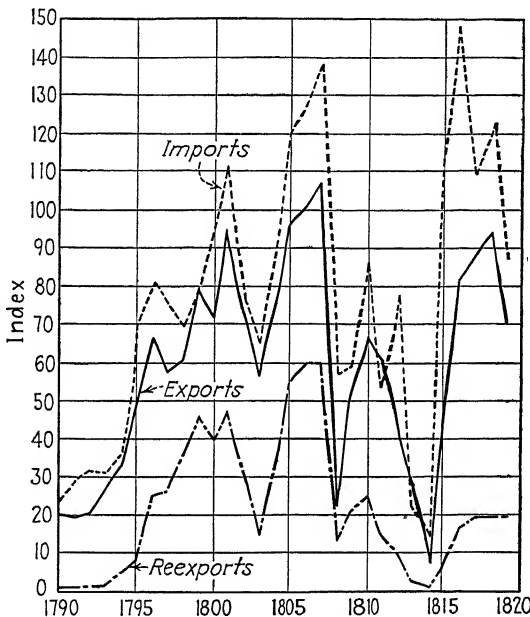


FIG. 10.—Imports, exports, and reexports of the United States, 1790–1820.

trality. This tendency of course brought a corresponding increase in the country's imports, which between these two years rose from \$23 million to \$138 million. However, even if the reexports are deducted from total imports and exports, these figures indicate a remarkable expansion of the country's foreign trade, though some allowance should be made for the higher prices that prevailed. At the same time the tonnage of American shipping engaged in the foreign trade rose from 127,000 to 1,089,000 tons and this shipping was carrying 92 per cent of the value of our trade in 1807 as compared with 24 per cent in 1789. But the year 1807 marked the high point of this remarkable advance; from then on, growing complications with the belligerent nations caused a considerable reduction in both trade and shipping and tended to reverse the effects of the previous

abnormal stimulus. We now turn to the events leading up to this sudden change.

When war broke out between England and France, the latter opened the trade of her West Indian colonies to neutrals, fearing lest England's dominance on the sea would cut off much of it. No sooner had American ships rushed to engage in this trade than England issued an order subjecting such vessels to seizure under the Rule of 1756 that trade not open to neutrals in time of peace could not be opened in time of war. Other restrictions followed; many vessels and cargoes were seized. English-born seamen on American ships were impressed by British ships, even when they had become naturalized Americans, since England denied their right to change their nationality, as indeed was customary in Europe at that time. As war seemed imminent and it was realized that the country was in no condition to fight, Jay was sent to England in 1794 to try to negotiate a treaty to settle these disputes, together with other questions connected with the carrying out of some of the provisions of the treaty of peace of 1783, and to secure more favorable trade conditions.

The resulting treaty was a great disappointment to the United States. It provided that Great Britain should give up the western posts which she still held, and established commissions to settle the claims arising out of the seizure of ships and the old unsettled debts due English merchants. Nothing was said about payments for slaves carried away by the British in 1783, or about impressment and the right of search of American ships. The commercial clauses included provisions for admitting American vessels to ports of British India, but the concession admitting those of not over 70 tons burden to the British West Indies was accompanied by such severe restrictions that this clause was eventually eliminated. It was only with difficulty that Jay's treaty was finally ratified in 1795.

Although commerce expanded rapidly in the following years, the neutral position of the country resulted in an effort by both France and England to restrict American commerce where it was of any advantage to either country. President Washington took a firm stand in favor of strict neutrality, and this attitude was supported by the Federalist party, made up of those that favored a strong central government and including most of the merchant class in the North, who feared trade would suffer if the country entered the war. On the other side was the Republican party led by Jefferson with its chief strength in the South—a party fearing the power of the Federal government and including many who, through hatred of England or admiration for France, favored taking a more friendly attitude toward the latter. When French intrigues for aid were rebuffed, France, claiming that, since the United States failed strictly to enforce its rights as a neutral against British restrictions, it

virtually was taking sides with England, began to make reprisals on American shipping. So far was this carried and so humiliating was the treatment accorded by France to the commissioners sent over by the United States, that in 1798 the country prepared for war with France. Though actual hostilities occurred war was not declared, and two years later an agreement was reached which relieved the strained relations.

By this time the depredations of the Barbary pirates of the north coast of Africa had reached a point where the United States was unwilling to pay the increased bribes demanded as a condition for stopping their raids on our commerce. In 1801 war with Tripoli broke out and the newly created navy secured a peace in 1805 which put an end to these raids, though tribute was paid to some of the other states up to 1815.

In 1802 the Treaty of Amiens restored peace in Europe and a sudden drop in the volume of American foreign commerce resulted. But scarcely a year had passed before France and England renewed the struggle and the rising ambitions and power of Napoleon soon involved all Europe. The American carrying trade and commerce now mounted to even greater heights; but this fact, combined with the growing intensity of the struggle between France and England, only led each to greater encroachments on our neutral rights. In his effort to destroy the commerce of Great Britain Napoleon developed his Continental System designed to cut off all British trade with the Continent. As his control over the Continent was extended this was fairly successful. When he tried to expand the system and cut off all British trade under the Berlin decree of 1806 and the Milan decree of 1807, which declared a blockade of the British Isles and made all ships touching at British ports or permitting British search subject to capture and confiscation, he was less successful, for the British navy had by that time obtained fairly effective control of the seas. Meanwhile Great Britain, in the effort to cut off all commerce with France and the countries subject to her control, was issuing Orders in Council, which practically declared all such trade illegal and all vessels engaging in it without British permission subject to confiscation.

These decrees and orders of France and England, if enforced, would have put an end to practically all trade between the United States and Europe and most of the American carrying trade as well. Although they could not be strictly enforced and American shipping proved quick to take advantage of any loopholes existing, the constantly changing regulations did result in the confiscation of many valuable ships and cargoes, and Great Britain continued to impress American seamen. Never, either before or since, has the position of the country been so humiliating as in these years.

American Measures of Retaliation. The United States was still reluctant to resort to war, partly because the country was unprepared and

partly because the commercial interests were opposed; so recourse was once more had to negotiation and then to commercial retaliation. President Jefferson, in view of colonial experience just before the Revolution, held that economic pressure in the form of a boycott might serve as well as war to secure concessions; and in April, 1806, Congress passed a non-importation act excluding certain British goods such as could be produced at home or obtained elsewhere. This was to take effect the following November if Great Britain did not make concessions in the meantime. As treaty negotiations with England were still pending, the act was temporarily suspended and did not become effective until Dec. 14, 1807. The treaty agreement drawn up in December, 1806, proved so distasteful that Jefferson would not even submit it to the Senate for ratification.

In the following year, under the new decrees and Orders in Council, the depredations on American commerce became so frequent, extending even to an attack on an American naval vessel, that in December Congress, on the recommendation of Jefferson, passed the Embargo Act which prohibited the sailing of any vessel from any port in the United States to any foreign port. This hasty and rather foolish act was about as effective a measure of retaliation as committing suicide, for if enforced it would put an end to all foreign commerce. Although the law was extensively evaded, it did result in a great decrease in foreign trade; the total exports for the fiscal year ending with September, 1808, fell to one-fifth the value of exports for the preceding year, and imports were more than cut in half. The carrying trade and shipbuilding industry faced ruin and the commercial states suffered severely; New England began to talk of secession; and the cutting off of the exports of timber products, foodstuffs, and the Southern staples reacted unfavorably upon the agricultural classes. So general was the outcry that even Jefferson's own party followers deserted him and in March, 1809, the Embargo was replaced by the Nonintercourse Act, which only prohibited all trade with France and Great Britain but provided that, if either country repealed its obnoxious orders or decrees, the President might reopen trade with it.

Commerce at once revived, but even in 1810 exports and imports were only about three-fifths in value of the amount reached at the high point in 1807. Continued opposition to the Nonintercourse Act led in May, 1810, to a law repealing it but providing that, if either France or England should withdraw her objectionable decrees and the other did not, the Nonintercourse Act should be revived against the latter. The restrictions on English commerce had been favorably regarded by Napoleon and, when they were removed, he retaliated by wholesale confiscation of American vessels in ports under his control. There followed a series of negotiations, marked by great lack of straightforward dealing on the

part of both England and France, which finally resulted in the revival of the Nonintercourse Act against England in March, 1811. By this time the ineffectiveness of the measures of economic warfare in preventing European exactions and depredations was only too patent to all. The young "War Hawks" of the West and the South in particular, incensed by their belief that the British officials in Canada had supported Indian attacks and convinced that the conquest of Canada would be an easy undertaking, and also desirous of maintaining an outlet to the foreign markets which had been yielding such a high price for their products, demanded a more vigorous assertion of American rights. Under their leadership in June, 1812, Congress finally decided upon recourse to war, not knowing at the moment that England had decided to withdraw her Orders in Council. The economic aspects of the war period will be treated separately.

Commerce on the Mississippi and Spain. Before turning to an account of domestic conditions during this period, we should note one other way in which the disturbed conditions in Europe reacted upon this country, with results of momentous consequences, though at the time the real significance was little realized.

Even before the Revolution a small band of settlers had found their way over the Appalachians and located in Kentucky, Tennessee, and western Pennsylvania. After peace returned this westward movement was actively resumed so that by 1790 there were over 100,000 settlers located in the region. The cost of transportation eastward over the mountains was so great that scarcely any of the products of this region could stand it; hence the only outlet for bulky products was by flatboat down the Ohio and Mississippi Rivers to New Orleans where they were transshipped to ocean carriers. But New Orleans and both banks of the lower Mississippi belonged to Spain, which was thus in a position practically to bottle up the only outlet for products of the Western settlements.

Spain was not unmindful of the advantage she thus possessed, and started intrigues to foment the dissatisfaction that existed among the Western settlers, who thought that the government was not sufficiently active in protecting their economic interest in commerce down the Mississippi or in suppressing Indian raids, and talked of secession. The situation threatened to become serious until, in 1795, a very favorable treaty was obtained from Spain which fixed the thirty-first parallel as the northern boundary of Florida, acknowledged the right of the United States to free navigation of the Mississippi throughout its course, and, what was almost as important, granted for three years the right to deposit goods at New Orleans for transshipment free of duties; this right was to be subsequently renewed either at New Orleans or elsewhere near the mouth of the river.

The movement for secession was quieted and commerce down the river rapidly mounted in volume; in fact it grew to dimensions that caused some alarm among the Spanish officials. The right of deposit at New Orleans, given by the treaty, lapsed in 1798, but after a few months it was practically restored, until orders from the Spanish king led to a proclamation withdrawing it in October, 1802. News of this event caused consternation in the western settlements; there was talk of an expedition to seize New Orleans, which would not have been difficult; and, though the government counseled delay, it was clear some action was imperative. Meanwhile events in Europe had created a situation that provided an easy and most fortunate solution of the problem.

The Purchase of Louisiana Territory. In the year 1800 the king of Spain, under the influence of Napoleon, who had visions of rebuilding a French colonial empire in America, secretly signed a preliminary treaty turning over Louisiana to France. Though the actual cession was not made until 1802, rumors of it had already spread abroad and caused much disquiet in this country, which greatly preferred that the possession of Louisiana should remain in the weak hands of Spain. Jefferson felt that "New Orleans was the one single spot on the globe the possessor of which was the natural and habitual enemy of the American people," and, if France should acquire it, the United States would be driven to joining with England against her. So, after news of the withdrawal of the right of deposit reached Washington, President Jefferson appointed envoys to negotiate for the purchase of New Orleans and West Florida.

Meanwhile, Napoleon's plans for rebuilding a colonial empire were going awry. The first step had been to reconquer Santo Domingo; but the expedition sent out for this purpose proved a disastrous failure. As Napoleon was contemplating a renewal of the war against England, in which case Louisiana was likely to be seized by England, and as money was badly needed, he suddenly decided to offer to sell the whole of Louisiana to the United States. The astonished American envoys, authorized to purchase only a small bit of territory, had a veritable empire thrown at their feet. No negotiation was necessary except as to price, once the American envoys had summoned sufficient courage to exceed their instructions and take all that was offered. The price was fixed at \$15,000,000 out of which \$3,750,000 was deducted to settle American claims against France for confiscations of shipping.

The exact boundaries of the territory so acquired were not carefully defined and later claims were made that in the south it extended westward to the Rio Grande and eastward to the Perdido so as to include West Florida. These claims were disputed by Spain, but when the settlers in West Florida revolted in 1810 and declared it an independent state President Madison proclaimed a portion of it a part of the United States

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and the rest was soon occupied. The claim to the region westward to the Rio Grande later served as one reason for the annexation of Texas.

Thus a purely economic motive, the desire to control what was then the commercial outlet for the products of the trans-Allegheny settlements, was the primary reason for the acquisition of this vast territory. With the introduction of railroads and the decline in river traffic in later years the conditions that made control of that particular river outlet so vital have greatly altered, yet its importance lasted for many decades. But what was destined to be by far the most significant result of this act was practically ignored in the consideration of the statesmen responsible for it.

The purchase of Louisiana has been said to mark the turning point in the movement that made the United States a world power. It prevented any other nation from acquiring this valuable region, paved the way for further expansion to the Pacific, and eliminated the possibility of the growth of powerful and disturbing neighboring states. It added the western half of one of the largest and richest agricultural river basins in the world and practically doubled the area of the country. Yet of the ultimate significance of these facts in the future economic and political development of the country the statesmen of the time had almost no conception. Jefferson, stanch advocate of strict construction of the Constitution, was aghast at what his envoys had agreed to, wondering where he could find authority for such an action. He suggested a constitutional amendment, but finally, as was so often the case, swallowed his principles where practicality so dictated. He even seemed to doubt whether it would be wise for the nation to keep most of the territory north of New Orleans.

The resources of that region were practically unknown and contemporary opinion of the West showed little understanding of its future growth and value. Monroe, who had visited the Northwest just after the Revolution, wrote to Jefferson in 1786 that

. . . a great part of the territory is miserably poor, especially that near Lakes Michigan and Erie and that upon the Mississippi and the Illinois consists of extensive plains which have not had from appearances and will not have a single bush on them for ages. The districts therefore within which these fall will perhaps never contain a sufficient number of inhabitants to entitle them to membership in the confederacy . . .

A few years later Jefferson predicted that it would be a thousand years before the country would be thickly settled as far west as the Mississippi River, and Livingston, who negotiated for the purchase of Louisiana, said, "We shall not send an emigrant beyond the Mississippi in a hundred years."

When wise men held such views as to the future of the West, we must admit that it was only a fortuitous combination of circumstances, largely a product of the European wars, that determined the outcome of this event. Perhaps in time the expansive power of the country might have wrought similar results, but never on such easy terms. It was indeed a kindly fate that shaped the destinies of the country at this time. This incident of history, like England's acquisition of Canada in 1763, affords another illustration of the lesson that, when statesmen lack the scientific imagination that provides clear insight into the trends of human developments, events the most momentous in shaping the destiny of nations may be decided by that complex of conditions and forces, often of purely momentary character and significance, which we call "blind chance."

Summary of the Reaction of European Wars on the Economic Development of the United States. If we attempt to summarize the reaction of the European wars on the economic development of the United States during this period, it is clear that the acquisition of Louisiana territory was of little immediate significance, except as it quieted the fears of the Western settlers and furthered the growth of commerce down the Mississippi River. The reactions of those wars on our foreign trade and shipping, though less important in the long run, were immediately of much greater consequence.

From the economic point of view the most significant result of these reactions was that by stimulating foreign trade, shipping, and agriculture they furthered the development of the same general lines of economic activity that had been most important in colonial times—in short they tended to continue and accentuate the organization and features that had characterized the economic life of the country before the Revolution. This was the outstanding result during the period up to about 1808. Then came the Embargo and other restrictions which resulted in a sudden drop in our commerce and carrying trade and finally, after we entered upon the War of 1812, these activities were nearly annihilated. Thus after 1807 the reaction of these abnormal conditions was exactly the reverse of that during the years just preceding. Commerce and shipping suffered, the markets for many agricultural products were reduced, imports of manufactures declined and by the end of the War of 1812 almost ceased, while domestic manufacturing was greatly stimulated.

So the United States, increasingly cut off from economic intercourse with the rest of the world and compelled to become more and more nearly a self-sufficing economic unit, was forced to develop a national economy and a far greater degree of economic independence. Thus the shift from the rather provincial economy of colonial times to a more self-sufficient national economy was greatly hastened. It should also be noted that the

abnormal foreign demand for American agricultural products and shipping between 1793 and 1812 not only resulted in establishing a high price level but also gave a great impetus to the growth of wealth and the accumulation of capital within the country. By bearing these points in mind we can obtain a clearer understanding of the changes that marked what we have called the more normal trend of development in the economic life of the country, to which we now turn.

Economic Problems of the New Government. Since the two most serious defects of the government under the Confederation had been lack of taxing power and lack of control over commerce, the first Congress that assembled under the new constitution was at once occupied with the problems of remedying these defects through the use of the new powers just granted it. Alexander Hamilton, one of the nation's great statesmen, had been chosen as the first secretary of the treasury, and it was largely under his leadership that the constructive program for the rehabilitation of the government's finances was adopted. This program he outlined in a series of remarkably able reports issued from 1790 to 1795, which dealt with the questions of public credit, a national bank, the mint, and manufactures; and which suggested a comprehensive plan for obtaining revenue, refunding the debt, maintaining the government's credit, protecting manufactures, providing a coinage system, and establishing a national bank to aid the government in its financial operations as well as business in general.

The Government's Fiscal System. The most immediate need was for revenue to meet government expenses, pay the interest on the debt and, if possible, reduce the principal of the debt. The question was how this revenue could be obtained without arousing too much opposition from the public; for then, as ever since, political considerations played an important part in determining the taxing system of the government, all the more so at that time as the new government could not take the chance of weakening itself by alienating any appreciable group of its political supporters. As direct taxes were particularly obnoxious to the people, indirect taxes were preferred and Congress very naturally chose customs duties, the form that the people were already used to and one that had been among the chief sources of colonial revenues. Added reasons for this choice were the belief that such duties could be used to force concessions from other countries, which had proved to be impossible under the Confederation, and also the desire to provide protection for the recently developed manufacturing industries of the country. Hence the first act of the new Congress was the Tariff of 1789. This law imposed specific duties, that is duties of so much per physical unit of a commodity, on some thirty products and ad valorem rates, that is a given percentage of their value, on other commodities; the rates on a few things were as high as 15 per cent

though most paid only 5 per cent; the average rate has been estimated at $8\frac{1}{2}$ per cent.

At this point it may be well to point out that customs duties levied for the purpose of securing revenue are essentially different from those designed to afford protection. A protective duty is intended to increase the domestic output by decreasing imports and the more successful it is the fewer the imports and the less the amount of revenue received by the government from that source. Such a duty tends to increase the price of the product or in some cases simply prevents the price from falling as much as it otherwise would. This higher price is paid by all purchasers of the commodity whether it is of domestic or of foreign origin. But of the increased cost to the consumer the government obtains only the portion paid in the form of a duty on the imports. The increase in prices on the domestic output goes to the producers of those goods, presumably to meet their higher costs of production. Thus the government obtains only a portion of the increased cost resulting, varying directly with the amount of goods imported.

Such a duty considered simply as a tax measure violates one of the canons of sound taxation—that the revenue received by the government from a tax should nearly equal the burden imposed by the tax upon the people. Hence duties that are protective, however desirable protection may be, are not the type that should be chosen if revenue is the chief objective, even though such duties, especially if they are moderate, may actually yield considerable revenue. Conversely, it is obvious that duties imposed for the sake of revenue should be levied on commodities that are not likely to be produced to an appreciable extent in this country and are imported in considerable quantities, such as moderate duties on tea, coffee, or cocoa; fairly high duties on imported luxuries, if the imports are not likely to be greatly reduced thereby, are also looked upon as essentially revenue-producing duties.

The Tariff Act of 1789 reflected the desire for both revenue and protection; which of these motives dominated is a question concerning which there has been considerable difference of opinion. Considering the low level of duties and the character of the commodities upon which special rates were imposed there can be little doubt that in actual effect the act was more significant in producing revenue than in affording protection. In any case, it is clear that the frequent changes in customs duties in the years immediately following were very largely determined by the need for more revenue. Previous to 1800 the receipts of the government frequently fell below the steadily mounting expenditures and the various advances in customs duties that occurred were primarily designed to secure more revenue. Thereafter, up to the outbreak of the War of 1812, the mounting volume of imports so increased the receipts that, combined

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with greater economy in expenditures, there was a surplus of revenue in every fiscal year but 1809, when trade was restricted. Consequently the customs duties were left almost stationary at a very moderate level. Also, the general prosperity of agriculture and commerce up to 1808 tended to lessen the demand for protection; after that date the restrictions on commerce automatically provided protection. We may say, therefore, that this first period in our tariff history was marked by a low level of duties primarily designed to produce revenue. How great was the dependence on this source of revenue can be judged from the fact that, up to 1812, nine-tenths of the total receipts of the Federal government were derived from customs duties.

Taxes and Other Sources of Revenue. Although customs duties were the main reliance of the government during the first decade under the new constitution, they failed to yield sufficient revenue to meet expenditures, especially so after the threat of war with France necessitated an increased outlay for the army and navy. Originally the great public domain had been regarded as one of the government's chief economic assets and it had been expected that the sale of public lands would bring in a considerable revenue. As will later be explained, conditions during this period were such that only an insignificant amount was obtained from this source and consequently the government found it necessary to supplement the customs revenue by imposing new taxes. In 1791 an act was passed levying an internal revenue tax upon spirits distilled from molasses, sugar, or other foreign materials, and also on spirits distilled from domestic products; the resulting revenue was to be used solely to pay interest on the public debt or reduce the principal.

This tax proved very obnoxious to the farmers who were accustomed to distill whisky from their grain, especially those who lived on the frontier where the heavy costs of transportation made it impossible to market their grain except when reduced to some less bulky and more valuable product such as whisky. It was this situation that led to the outbreak of the Whisky Rebellion in Pennsylvania in 1794, which eventually required troops to put it down. This tax proved an expensive one to collect and, as the revenue obtained was not large, additional internal revenue taxes were imposed in 1794. This act levied taxes on carriages, the sale of different liquors, the manufacture of snuff, the refining of sugar, and auction sales; three years later a stamp tax on legal documents was added. Finally, in 1798, when war seemed imminent, Congress levied a direct tax of \$2 million to be apportioned among the states and charged against houses, lands, and slaves.

In 1801 the Republican party came into control of the government with Thomas Jefferson as president. They favored strict economy in government expenditures and opposed the internal revenue taxes as

inquisitorial and undemocratic. Albert Gallatin was made secretary of the treasury and under his efficient administration expenses were so much reduced that in 1802 it was possible for Congress to repeal the internal revenue taxes. This meant a loss of about \$600,000 a year revenue; for the receipts from these taxes, derived chiefly from that on distilled liquors, had never been large and only rose as high as \$1 million in two years. The loss, however, was much more than counterbalanced by the increase in receipts from customs duties; so that, in spite of the increased outlay later necessary for defense, from 1801 until the outbreak of war in 1812, the treasury had a surplus in every year but 1809, though the extraordinary payment incident to the purchase of Louisiana had to be met by borrowing. (See the charts on page 495.)

The Question of the Debt. After taking steps to secure revenue the new government turned to the problem of the debt. Hamilton had carefully studied the question and in January, 1790, sent to Congress his first Report on Public Credit. He estimated that the principal and arrears of interest on the foreign debt then amounted to \$11,710,000 and that the amount of the domestic debt, including arrears of interest, was some \$42 million. This debt Hamilton proposed to refund; that is, to issue new bonds either to be sold and the proceeds used to pay the old bondholders or to be exchanged directly for the old debt. Under his plan the old debts were to be paid at their face value together with any accumulated interest; thus the government would recognize in full its original promise and maintain its faith with the creditors.

That such a policy was proper in the case of the foreign bondholders nobody questioned, but the idea of paying the domestic debt at its face value aroused much opposition. The chief reason for this was the fact that the evidences of that debt had for some years been selling at very much less than par and, although full payment was no more than just in the case of those who still held the certificates of indebtedness originally received from the government, many had sold their certificates at a low price to speculators, in which case payment in full would simply benefit these speculators. In fact, as soon as Hamilton's plan became known, speculators hastened to send agents through the country districts to buy up the debt before the holders should learn of the proposed plan of redemption. In spite of the opposition Congress finally decided to adopt the plan and maintain the faith of the government by redemption of its debt at face value, the only exception being the old Continental paper money still outstanding which was to be accepted for the new bonds at the rate of 100 to 1.

Hamilton's plans went still further and included the proposal that the Federal government should assume the outstanding debts of the different states incurred in payment for services and supplies during the Revolu-

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tionary War, this to be carried out by exchanging new government bonds for the old state debts. This suggestion met with even more opposition on the ground that it was not equitable for all the states, since some of them had already paid off a considerable amount of their debts and others had met a large proportion of the war expenses by issuing paper money instead of bonds. This was notably the case of the Southern states, and, in order to overcome their opposition, a compromise was adopted under which it was agreed to locate the seat of government on the Potomac River in return for the Southern votes for the assumption of the state debts. The amount of the state debts finally taken over was a little more than \$18 million. Thus the number of people financially interested in the success of the Federal government through holding its bonds was considerably increased; this result, in fact, was one of Hamilton's chief reasons for advocating this scheme. (See the chart on page 494.)

The total debt of the new government in 1791 was a little over \$75 million. In the years immediately following, as receipts often fell below expenditures, the government frequently had to go out and borrow more funds, generally through short-time loans; but the net result was an increase in the total debt, which by 1801 had mounted to \$83 million. In the more prosperous fiscal years that followed, the appearance of a surplus made it possible, in spite of the additional debt created in connection with the purchase of Louisiana, to repay much of the principal, so that by 1812 the outstanding debt had been reduced to \$45 million.

Thus under the guidance of Hamilton and Gallatin the credit of the new government was established and well maintained and with the opening of the new century a fairly adequate fiscal system had been developed. The disturbed condition of Europe had reacted upon the course of fiscal events in two ways: by increasing expenditures to prepare for the possibility of war and by increasing customs receipts through the abnormal stimulus to commerce. The chief defect in the system then developed was the almost exclusive reliance upon customs duties for revenue, since the income from this source, being subject to great fluctuations, was most uncertain. This was made evident in 1809 and during the War of 1812.

The First United States Bank. It was partly as a means for facilitating the fiscal operations of the government that Hamilton in December, 1790, issued a report favoring the establishment of the United States Bank. The lack of any banking system had been one of the defects in the colonial economic organization and the financing of the Revolution was much hampered thereby until Morris established the Bank of North America in 1781. In 1784 Hamilton had taken part in starting the Bank of New York and the Massachusetts Bank had been founded about the same time. Thus a beginning had been made in supplying this need, but

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Hamilton believed that as an aid to the government as well as to business in general a larger institution was needed. The opposition to the bank was chiefly based on general fear of a powerful financial monopoly not in keeping with democratic institutions, though some feared it would increase the power of the Federal government and urged that Congress had no constitutional power to establish such an institution. But in spite of the opposition, which came chiefly from Southern members, Congress finally passed the proposed law in 1791.

The act chartering the United States Bank provided for \$10 million capital stock, one-fifth of which was to be subscribed for by the government and the rest by the public, who were to pay one-fourth of their subscriptions in cash and the rest in government bonds. The government subscription was met by a loan from the bank, repayment of which was spread over 10 years. The charter ran for 20 years and authorized the bank to issue notes, carefully limited in amount, and to establish branches.

As Hamilton anticipated, the bank proved extremely useful to the government. It was large enough so that it was able to lend considerable sums to the government when, as was so frequently the case during this period, it was forced to borrow; finally, these loans reached so large an amount that the bank in self-protection was forced to insist on a reduction, and in 1802 the government finally sold such of the bank stock as it had not already disposed of when revenue had been needed to help reduce these loans. However, the government obtained a handsome profit on its investment. In addition, the bank became the chief fiscal agent of the government; most of the government receipts were deposited in the main office in Philadelphia or in one or another of the bank's branches, eight of which were eventually established in the chief seaports from Boston to New Orleans. These different offices also facilitated the payments made by the government in the different sections as well as the transfer of funds from one region to another. In similar ways the bank was an aid to private business enterprise for, though private banks began to increase very rapidly during these years, as will later be explained, few were so soundly managed as the United States Bank; its note issues, unlike the issues of most state banks, circulated freely throughout the country and thus provided an important and sound addition to the circulating medium.

The charter of the United States Bank was to expire in 1811, so the question of its renewal eventually came before Congress. By that time the strength of the opposition to the bank had increased. The large number of state banks then in existence feared the power and the competition of the United States Bank and so sought to prevent a renewal of its charter. Also, more than half of the stock of the bank had passed into the hands of foreign holders and an outcry against the danger of foreign domination

was raised; however, there was no reason for such a fear since foreign stockholders had no right to vote their stock. Finally, there was the old popular dislike of anything in the nature of a money power. Though Gallatin made a report pointing out the many advantages of the bank to the government, the bill renewing its charter was finally defeated in the Senate by the deciding vote of the Vice-President and the bank wound up its affairs in 1811. This was a most unfortunate time as events turned out, for its services were badly needed during the years of the war that immediately followed.

The Mint and Coinage. The Constitution gave the Federal government the exclusive right to establish a mint and provide a coinage. In drawing up a plan for carrying out this function of the new government Hamilton again took the lead, his Report on the Establishment of a Mint being presented in May, 1791. During the Confederation Congress had recommended that the Spanish milled dollar, so widely used in colonial times, be adopted as the unit of a decimal currency system, but no action had been taken to supply a coinage. The Mint Act of 1792 in the main followed Hamilton's plan. It provided for the establishment of a mint and the coinage of gold, silver, and copper. The system adopted was a bimetallic one with free coinage of silver and gold at a coinage ratio of 15 to 1; that is, there was to be 15 times as much pure metal in a silver dollar as in a gold dollar, the actual amounts being $371\frac{1}{4}$ grains of silver and $24\frac{3}{4}$ grains of gold. Both silver and gold coins were made legal tender.

Since the United States was producing practically no silver and not very much gold, foreign bullion or coin was chiefly used at the mint. Also, since the ratio of silver to gold in the bullion market was fluctuating around $15\frac{1}{2}$ to 1, the coinage ratio of 15 to 1 undervalued gold and overvalued silver and, consequently, under the operation of Gresham's law, this not only tended to check the flow of gold to the mint but helped to drive gold coins out of circulation. Furthermore, when it was found that the new silver dollars were being exported to the West Indies, where their brightness appears to have given them an added value in trade with the natives, it was decided to stop their coinage in 1806. As a result of these conditions the number of coins minted during this period was relatively small, the total of the gold coinage previous to 1812 amounting to less than \$4,000,000 and that of silver to about \$5,500,000. Since this was insufficient to meet the needs of the country, foreign coins continued to be used and complicated the processes of exchange; but at least a beginning had been made in securing a better circulating medium. Long established habit, however, resulted in widespread continuation of the use of the English pounds, shillings, and pence in quoting prices; in fact this lasted well into the nineteenth century in spite of the inconvenience caused by having a circulating medium based on the dollar.

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With the enactment of this series of measures dealing with government finance, control over commerce, banking, and money the most pressing needs of the new government had been provided for. Other measures for promoting the economic development of the country can best be described in connection with an account of the general economic conditions to which we now turn.

CHAPTER XV
ECONOMIC CONDITIONS UNDER THE NEW
GOVERNMENT AND WAR'S REACTIONS,
1789-1815.—(*Continued*)

Population and Immigration. The first census was taken in 1790 to determine the basis of representation in the House of Representatives and indicated a total population slightly less than 4,000,000 including some 700,000 slaves. In the two succeeding decades the population was increasing at a rate that would have doubled it every 26 years, indicating that the rapid growth that prevailed before the Revolution continued unabated. The influx of immigrants, interrupted during the Revolution, was also resumed; and, although no definite figures are available, it is estimated that the number of arrivals averaged about 4,000 a year between 1784 and 1794; from then on to 1810, about 6,000 yearly. Through this influx and the rapid natural increase plus the small addition from the acquisition of Louisiana the total population of the country rose to more than 7,000,000 in 1810, over one-seventh of this number being slaves.

The Westward Movement of Population. An important feature in the internal migration of the population during these years was the rapid influx of settlers into the region beyond the Alleghenies which began after the Revolution. This movement was furthered by the acquisition of title to various sections through treaties with the Indians, by the sale of lands belonging to the various states or to the Federal government, and by the introduction of better means of transportation.

During the earlier years most of those going to the West came from the upland of the Southern states and followed the old trail through the Cumberland Gap to the small settlements previously made in Kentucky and Tennessee. But after 1800, with the growing number migrating from the middle states and following the roads through Maryland and Pennsylvania, Pittsburgh became the immediate objective of an increasing proportion of the western emigrants. There they could obtain supplies which were loaded on a flatboat and thus fitted out could float down the Ohio until they reached the point nearest the place where they wished to locate; then they would disembark, proceed through the wilderness to a spot favorable for settlement, make a clearing, and erect a log cabin.

Settlements north of the Ohio River first developed rapidly after the Ohio Company made its large purchase of land and founded Muskingum with people largely from New England. Shortly afterward another group of settlers, chiefly from New Jersey, established Cincinnati. The land in northeastern Ohio known as the Western Reserve was owned by Connecticut and its sale led to the founding of Cleveland in 1796. Except for a small settlement at Detroit, there were very few inhabitants west of Cleveland in the region bordering on the Great Lakes before 1812. Nor outside of Ohio were there many people any appreciable distance north of the Ohio River; even the old French settlements in the vicinity of St. Louis showed little growth. Out of a total of more than 1 million in the Western states in 1810 over two-thirds were living south of the Ohio River, for the most part in Kentucky and Tennessee. In the far South the westward advance was checked in central Georgia by hostile Indians and only Louisiana had any appreciable number of inhabitants. New England during this period was still finding an outlet for her growing population in northern New Hampshire and Vermont; when these states were settled the overflow then turned to the fertile Genesee Valley in western New York. By 1812 these sections were fairly well settled except for the interior of Maine. (See maps on pages 317-318.)

The Public Land System. The public land system of the country was first formulated by Congress during the period of the Confederation. In 1784 Jefferson drew up an elaborate plan for the government of the territory ceded by the states, but the resulting Ordinance of 1784 which Congress adopted never became effective. It was superseded by the famous Ordinance of 1787 which laid down the general principles that afterward prevailed in the government of territories and their eventual admission as states, though it applied specifically only to the Northwest Territory which by that time had been ceded to the government by the states. On the economic side this ordinance is of interest because it prohibited slavery in the Northwest Territory; it also did away with the system of primogeniture that had prevailed in most of the colonies by providing that the estates of persons dying intestate were to descend in equal parts to their children or other heirs after the widow had received a one-third share, thus tending to check the growth of large landed estates.

Meanwhile settlers had been moving onto the public domain and it had become necessary to adopt some plan for surveying and selling it so that land titles would be secure. The basic features of the system adopted were laid down in the Ordinance of 1785 which authorized a rectangular system of surveys of the land in townships six miles square, divided into 36 sections one mile square, each containing 640 acres. The sixteenth section in each township was reserved for the support of public schools,

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an important step in furthering the development of a system of free schools. In this feature, as well as in the township system of surveys, the ordinance reflected the influence of New England institutions; though sale in small sections was a concession to the individualistic methods of settlement which had characterized the Southern pioneers.

After title from the Indians had been secured and the land had been surveyed, it was to be offered for sale at public auctions, half in lots not smaller than 640 acres and the other half in whole townships, at not less than \$1 an acre with cash payment. It was under this arrangement that the Ohio Company in 1787 purchased 1,500,000 acres on the Muskingum River. Though payment was made in Continental certificates of indebtedness, then worth about one-tenth of their face value in specie, it at least served to reduce the public debt. Large tracts were also purchased at this time by the Scioto Company and on the Great Miami by Symmes, and considerable quantities were disposed of in fulfillment of the bounties that Congress had promised to soldiers in the Revolutionary War.

Congress looked upon the public domain as an important economic asset from the sale of which it was hoped to derive considerable revenue and help pay off the debt, and this attitude was reflected in the conditions governing its sale. But this ideal ran contrary to the wants of the Western pioneers who desired to obtain the land on as easy terms as possible, and from this time on this desire of the West was destined to exercise an increasingly important influence in shaping the public land laws. In 1796, though the minimum price was advanced to \$2 an acre, a year's time was given to complete the payment; and, instead of selling all of the land at Eastern offices as formerly, certain districts were to be offered for sale at Pittsburgh and Cincinnati. Even then the purchase price of a section was beyond the means of most settlers; so in 1800 the minimum amount that could be purchased was reduced to a half section or 320 acres, payment was spread in equal installments over four years, and additional offices were opened in the West. From then on until 1820 there were no important changes in the land laws except that in 1804 certain portions were made available in quarter sections.

The Act of 1800 considerably increased the sales and also fostered speculation under the long term of credit allowed, for many took up more land than they were finally able to pay for and the government was constantly being besought to afford them relief. Yet the sales of government land were not what had been hoped for and the revenues obtained from that source proved relatively small. The chief reason was that during this period many of the states still had land for sale, which they offered at prices considerably below that fixed as a minimum by the government, and warrants for government land given as military bounties or in other ways could also be purchased at a lower price. Consequently only a por-

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tion, estimated at less than a quarter of those who went west at this period, were affected by the laws disposing of the public domain.

Improvements in Transportation. As population moved away from the seaboard waterways into the interior, the need for better means of inland transportation became more and more pressing. Wherever navigable rivers were available the utmost use was made of them; at points where obstructions existed, they were either removed, if possible, or a canal was constructed around them. The first canal of any importance was that around the falls of the Connecticut River at South Hadley, Mass., which, with the aid of Dutch capital, was finished in 1794. The same year work was begun on the Middlesex Canal connecting Boston with the Merrimack River and designed to attract the traffic of that river to Boston. It was 27 miles long and was opened to traffic 10 years later. The same wish to attract river traffic to a large seaport was responsible for the construction of a canal connecting the Santee River with Charleston in South Carolina, a project that was finished in 1800. Other smaller canals were started during this same period, but these undertakings were expensive, capital was scarce, and traffic had still to be developed; so the great era of canal construction did not come until after the War of 1812. Although an event of the greatest importance in river transportation—the introduction of the steamboat—occurred during this period, its effects were not appreciable at the time and will therefore be described at a later point. Consequently the most important improvements in transportation during this period took the form of betterment of the highways.

It was, indeed, clear that under the existing conditions the facilities for transportation overland would prove one of the most vital of the factors shaping the country's economic development. Unless the costs of such transportation could be reduced to a low level, the products of most sections would have to be consumed in the neighborhood where they were produced, division of labor would be limited, and an essentially local economy would generally prevail. Hence, at a period when railroads were undreamed of, improvement of the highways and roads was all-important. It is estimated that "over an ordinary horse path or trail a horse may carry about two hundred pounds; on a cart, over a good dirt road, the same horse may draw one thousand pounds." By 1824 it was estimated that the cost of moving freight over the turnpikes had been reduced to around 13 cents per ton-mile; over ordinary roads the cost was two or three times as much. Thus there was a great saving in the costs of transportation from improved highways, and only through such a reduction in costs was it possible for farmers to send their bulky products to market and sell them at a profit.

To send a ton of goods from Buffalo to New York cost \$100 as late as 1817. To send goods from Philadelphia or Baltimore to Pittsburgh or

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Wheeling cost from \$6 to \$8 a hundredweight; ginseng, saltpeter, and beeswax were said to be the only products of Kentucky that could stand the cost of being shipped overland to the Eastern seaboard. Where the usual cost of carriage over country roads was 50 cents per hundredweight for 20 miles, corn selling at 35 cents a bushel—a common price in the interior—could not stand the cost of moving 25 miles even if the corn cost nothing originally. Wheat at the prevailing prices on the same basis could not be carried more than 50 or 75 miles. Fulton estimated that flour could not be carried over 150 miles, and it was said that, although a ton of goods could be carried across the ocean for \$9, it could not be sent overland on the ordinary roads at that price for more than 30 miles.

Passenger travel was also expensive, the rate on the stage lines being about 6 cents a mile. To go from Philadelphia to Pittsburgh in 1812 cost \$20 and required six days; freight required from four to six weeks. During the War of 1812, when coastwise traffic was interrupted and goods had to be shipped overland, in summer, when the roads were good, it took wagons carrying freight 26 days to go from Boston to Baltimore and from that place to Augusta, Ga., 33 days more. At important ferries during the war people sometimes had to wait three days for their turn to be carried across, for it was estimated at one time that 4,000 wagons and 20,000 horses and oxen were engaged on this route from New England to the South.

Under such conditions the demand for better roads was universal; but the problem assumed a different aspect when it came to paying for them. Few people were inclined to levy taxes heavier than were necessary to provide for the absolutely essential highways of the poorest grade that could be used at all and, once a road had been constructed, repairs and maintenance were apt to be sadly neglected. Thus, while the towns and counties generally remained satisfied with providing only ordinary dirt roads, the construction of the better class of highways was largely left to private enterprise. This took the form of turnpike companies chartered by the states and allowed to charge tolls for the use of their roads, but subject to rather careful regulation as to rates and profits. The costs of such roads varied from \$900 to \$10,000 or more a mile. Similar reasons led to the organization of corporations to construct toll bridges over the larger streams to replace the slow and more expensive ferries.

The first important turnpike thus completed ran from Philadelphia to Lancaster. It was opened in 1794 and was designed to attract traffic from the valley of the Susquehanna to Philadelphia instead of down the river and around to Baltimore. It cost about \$7,000 a mile and the toll rates, varying with the width of tires and number of horses, were from about $\frac{1}{2}$ cent to 13 cents a mile, though from 2 to 4 cents was the most common charge. After about 1800 the organization of turnpike companies

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was pushed and in many cases financial aid was extended by state subscriptions to their stock. Several hundred such companies were chartered before the war of 1812 but most of them were located in the Northern states, since the more scattered population in the South offered less prospect of financial success.

One difficulty attending this method of highway construction was that the roads were laid out chiefly with regard for purely local needs so that good direct through routes were neglected unless they also happened to coincide with local needs. Furthermore, in the sparsely settled frontier regions, there was not enough traffic to induce private capital to construct turnpikes, and the people were so poor that the towns and counties were unwilling to incur the outlay involved. Hence the economic development of such regions was often much delayed. This situation led to the demand, especially from the West, that the Federal government undertake the construction of internal improvements.

The first important step in this direction was a provision in the act of 1802 admitting Ohio as a state, under which 5 per cent of the net proceeds from the sale of public lands in that state was to be devoted to the construction of roads leading from the state to navigable waters flowing into the Atlantic; later a portion of this fund was made available for roads within the state. Thus means were provided for starting the Cumberland Road or National Turnpike beginning at Cumberland, Md., and extending westward to Wheeling on the Ohio and later continued through Columbus and Indianapolis to Vandalia in Illinois. But the government was slow in starting this important undertaking. Although an appropriation for surveys was made in 1806, actual construction did not begin until 1811 and it was not completed to Wheeling until 1818. Meanwhile, in 1808, Secretary Gallatin had drawn up an elaborate plan for a system of internal improvements by canals and roads to provide better means for long-distance traffic between the different sections of the country. Yet the results were slight as far as action by the Federal government was concerned. This was due in part to the opposition of sections that seemed likely to gain little from the outlay and in part to the claim of the strict constructionists that the government had no constitutional power to engage in such undertakings.

The Post Office and Means of Communication. There was, however, no question as to the power of the government to establish post roads and a post-office service, and the new government soon engaged in a rapid extension of these facilities for communication. In 1791 there were only 89 post offices and less than 2,000 miles of post roads; nine-tenths of the service was provided by riders on horseback, and 324,000 letters were carried. By 1811 the service had been extended to cover over 36,000 miles of post roads, there were over 2,400 post offices, and over 4,100,000 letters

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were carried. It was under this authority that Congress in 1789 established Zane's Trace, the first post road in Ohio, and eventually provided a regular mail route from Wheeling to Lexington, Ky. By 1813 the mail was being carried at a rate of about 40 miles a day on crossroads, while between the larger commercial cities it was carried from 60 to 120 miles inside of 24 hours. As late as 1817, a settler in Illinois complained that the Philadelphia newspapers came to him a month late and that the European news which they contained was still another month later. The letter rates fixed by the government in 1792 varied from 6 cents for a single-sheet letter carried 30 miles or less to 25 cents for one carried over 450 miles. These high rates tended to limit correspondence and led people where possible to find private facilities for the carriage and delivery of their letters. The fact that in 1790 the per capita expenditure for postage in the country was about 1 cent a year best indicates the limited use then made of the post office.

At the same time that the letter rates were fixed in 1792 newspapers were definitely made mail matter and the rates were fixed at 1 cent a paper for any distance up to 100 miles; $1\frac{1}{2}$ cents beyond that. This rate was protested on the ground that, when added to the annual subscription price of papers of around \$8 a year, it would check the spread of knowledge. By this time the number of newspapers published had considerably increased but even in 1792 it was estimated that at the most the whole number of copies of newspapers published in the United States in the course of a year was not over 4,500,000, and no single newspaper had as many as 3,600 subscribers. Although most of them were issued once or twice a week, there were at this time two daily papers. The *Pennsylvania Packet*, the first daily in the country, was started in 1784. The best presses in the country could not turn out more than 200 copies an hour and the scarcity of paper, which was still made of rags, compelled the publishers to start a campaign urging people to save their old clothes. Magazines along with books were excluded from the mails and their publication was thus effectively checked. Newspapers, however, increased rapidly in number, the total in 1810 reaching 364, of which 25 were dailies. Their growth marked a definite advance in the facilities for the economic organization of the country as well as in promoting social development.

Internal Commerce. The improvements in transportation helped to promote the growth of domestic commerce, but during this period the results obtained as far as land transport was concerned did not bring about any very radical change in the general character of that commerce except where turnpikes were constructed. Much of the trade remained confined to a rather limited area, simply a part of the local economy of the different regions. Outside of this most of the trade consisted in shipments of agricultural products from the interior to the leading seaports,

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either for export or domestic consumption, and the return of imported goods or domestic manufactured products to the rural and frontier districts. The coastwise trade involving an exchange of products between the Northern and Southern states expanded appreciably, especially after the introduction of cotton; during this period it was extended to include a considerable volume of trade with New Orleans. Northern manufactured goods began to be sent through the interior of the Southern states in increasing quantities and throughout the rural districts the tin peddler became a fairly important distributor of a miscellaneous assortment of small wares.

The most striking new feature of internal commerce during this period was the growth of the trade of the Western settlements. Although practically all of the surplus produce of that region was sent down the river to New Orleans, large droves of hogs and cattle went over the mountains to the markets at Philadelphia and Baltimore. By 1807 the receipts of commodities at New Orleans from up the river were valued at over \$5 million, of which about one-third consisted of Louisiana products. But at this time there was practically no return cargo; some 20 barges making about one trip a year sufficed to carry all the traffic that could stand the heavy costs of upstream movement previous to the advent of the steamboat. In consequence practically all the goods sent to the Ohio Valley settlements, consisting chiefly of manufactured products, were obtained from the seaports of New York, Philadelphia, and Baltimore. Thus was started the competition of these commercial centers for Western trade which later developed into a very active rivalry.

Agriculture. In 1790 agriculture was the main pursuit of over 90 per cent of the population and, during most of this period, conditions tended to maintain its preponderant position. The improvements in transportation and the opening of the West to settlement made new and fertile lands available, and the rapid rise in the price of farm products after 1791 was a great stimulus to production. In fact, as the chart on page 271 indicates, the whole of the succeeding period lasting until after the War of 1812 was marked by an abnormally high price level. The prolonged sustainment of this high level is one of the most important features of the period. Within five years after the European wars broke out in 1792, the prices of most of the great staples entering into the export trade had increased from 75 to 100 per cent. Except for a temporary drop in 1802-1803 following the momentary cessation of war and another in 1808-1809 following the Embargo and Nonintercourse Acts, this high level was well maintained throughout the period. Although farm products chiefly consumed within the country seldom rose in price to the same extent as those entering into the export trade, there were few that did not enjoy some advance. The period as a whole was therefore one of general prosperity for this basic

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branch of the country's economic life. In the background, however, there lurked the fact that conditions were abnormal, and there was consequently great uncertainty as to how long they would last. This risk was emphasized by such events as the embargo which, for the time being, paralyzed the commercial life of the country and momentarily made many farm products a drug upon the market.

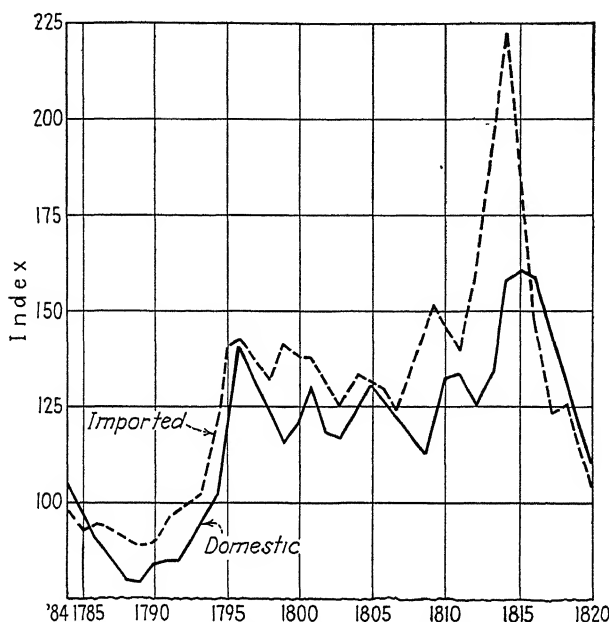


FIG. 11.—Index numbers of wholesale prices of domestic and imported commodities in Philadelphia, 1784–1820 (100 = average 1821–1825). (Based on Bezanson, Gray, and Hussey, “*Wholesale Prices in Philadelphia, 1784–1861.*”)

Aside from the general stimulus to agriculture, the most significant event in this branch of economic activity was the rise of cotton growing. Previous to the Revolution small quantities of short-staple cotton had been grown in the colonies, yet not in sufficient amount but what imports were necessary to meet the colonial needs, in spite of the fact that the high cost of cotton greatly limited its consumption. So small was the crop that in 1784, when eight bags of it were sent to Liverpool, they were seized by the customs officers on the ground that the United States could not have grown that amount. About 1786 the cultivation of the long-staple sea cotton first began to receive serious attention and, as the seed was more easily extracted, this grade was in great demand and brought a high price in the Liverpool market. Its production grew rapidly, and by 1801 over 8 million pounds were exported from South Carolina; but the area within which it could be grown was very limited as compared with

that available for the short-staple upland cotton. Though it is estimated that by 1793 between 2 million and 3 million pounds of this short-staple variety were being raised in South Carolina and Georgia, chiefly for domestic consumption, the great obstacle to its use was the difficulty in extracting the seeds, for it took a day's labor to clean a pound. This obstacle was overcome by Eli Whitney's invention of the cotton gin in 1793, which, even with hand operation, could clean 50 pounds a day.

The great reduction in the cost of cotton thus made possible gave a tremendous stimulus to its consumption for it at once began to displace flax and wool, and to a less extent silk, in a great variety of products of common use. What a blessing cheap cotton has brought to succeeding generations is seldom appreciated today. The short-staple cotton could be grown in the upland region of the South and under the stimulus of the high prices that prevailed—from 16 to 44 cents a pound in New York between 1790 and 1812—production increased by leaps and bounds; the total cotton crop of the country rose from about 1,500,000 pounds in 1790 to 85,000,000 pounds by 1810. This gave the upland Piedmont region of the South a new staple, led to the extension of the plantation system to that section, and created a new demand for slave labor. The farmers of that region, who had previously been exporting their surplus corn, now turned to raising cotton as their chief crop for the market.

Though far less important than cotton, cane sugar was another staple crop which was successfully established in the South at this period. Its production, however, was practically confined to Louisiana. Some sugar had been grown in that section before the Revolution but its cultivation had not been very successful and the amount produced was small. From about 1796 the output increased rapidly, aided by the introduction of a better type of sugar cane and the influx of French refugees from Santo Domingo. At this period the indigo plants had been severely injured by a pest and many indigo growers had turned to sugar. Among the other staples of the South the rice crop remained about the same, while new methods of cultivation were being introduced. The old tobacco-growing plantations were suffering from exhaustion of the soil and, with the exception of a few years, a lower level of prices, with the result that many turned to wheat. But new sections were opened up and the output of the seaboard states was being supplemented by a rapid increase in this crop in the new settlements in Kentucky and Tennessee. The Western settlers also began to produce hemp and flax at this time and in addition raised considerable quantities of livestock.

During this period the agriculture of the Northern seaboard states was marked by fewer changes in products and general character than occurred in the South. The New England states continued to grow much the same crops as formerly and chiefly for the domestic markets. This was.

also true of the middle states except that the war demand for foodstuffs and the resulting high prices proved a great stimulus to those engaged in producing for the export market. More attention was being given to the introduction of better methods in agriculture, as is shown by the organization of various agricultural societies throughout the seaboard states; however, it took time before their activities began to show appreciable results. Some improvements were made in introducing a better rotation of crops and system of fertilization, and the war in Spain gave an opportunity to import a small number of merino sheep that later became important as the basis of some of the best flocks yielding a fine grade of wool. Yet, for the most part, the methods of farming remained rather backward.

Manufacturing Industries. As has already been suggested, the abnormal conditions arising out of the European wars tended to create a situation which, up to the time of the restrictions on foreign commerce beginning with the embargo in 1808, was not favorable to the continued expansion of manufactures; from that time, the increasing difficulty in importing foreign goods, particularly after 1812, had the reverse effect and gave an abnormal stimulus to the domestic manufacturing industries.

Another difficulty confronting the American manufacturer in certain lines of industry was the rapid advance in technological methods that had been made in Great Britain since about 1770, notably in the textile and the iron and steel industries; this gave that country an even greater relative advantage in lowered costs of production than it had enjoyed theretofore. In 1774 Parliament had forbidden the exportation of these new machines or their plans and, although it proved impossible to prevent the ideas from being carried to this country, it did delay the introduction of the new methods. In spite of these unfavorable factors manufacturing industries did continue to expand even in the years before 1808 and, apparently, at a very fair rate. For the most part the growth which took place during these years must be attributed to the same conditions that had been responsible for the steady rise of manufacturing during the colonial period—the prevalence of a local economy combined with the increase in population and the rising standard of living.

Obviously this reason was responsible for the rise of many small manufacturing enterprises in the West at this time. Pittsburgh and Cincinnati developed a great variety of establishments to provide for the needs of settlers in the Ohio Valley region, and scattered through the smaller towns were the grist mills, lumber mills, forges, distilleries, and similar enterprises essential to the life of these growing communities and generally found in the rural districts throughout the country. Apparently, too, home industries had received a considerable impetus during and immediately following the Revolution, particularly in the South, and the plantations began to supply more of their own needs than

ever before. It is reported that about 1790 the planters began to clothe their slaves with homespun of their own make. Tench Coxe estimated that the families of the middle and interior counties of the Southern states turned out manufactured goods greater in value than those that they imported.

The Northern states also appear to have made steady progress in expanding their domestic manufactures during this period. The desire to attain greater independence of foreign goods led to various measures designed to stimulate domestic industry. Bounties were given on certain products, prizes were awarded to families for the quality or quantity of their output of cloth, and local aid was extended to further the establishment of manufacturing plants.

In Gallatin's *Report on Manufactures* in 1810 he declared that by far the greater portion of goods made of cotton, flax, and wool was manufactured in private families, mostly for their own use but partly for sale; and, in view of the rapid increase during the two years preceding, he concluded, "it is probable that about two-thirds of the clothing, including hosiery, and of the house and table linen, worn and used by the inhabitants of the United States, who do not reside in cities, is the product of family manufactures." In the iron and steel industry he estimated the value of the domestic manufactures at from \$12 million to \$15 million, or between three and four times the value of the imports of these products. In certain branches of manufacturing Gallatin reported that the domestic output was more than sufficient to meet the needs of the country; these branches including manufactures of wood, leather, soap, tallow candles, spermaceti oil and candles, flaxseed oil, refined sugar, and coarse earthenware. Other branches he believed might be considered as firmly established since they supplied at least a considerable part of the domestic needs. These included manufactures of iron, wool, cotton, flax, hats, paper, printing types, books, spirituous and malt liquors, hemp, gunpowder, window glass, jewelry, clocks, straw hats, lead, and wax candles. The first attempt at enumeration of manufactures, made in the Census of 1810, put the total value of all manufactured products at slightly less than \$200 million.

The greater part of the growth of manufactures during this period was in the household industries or the small workshops, mills, or plants producing chiefly for local needs. There were a number of these industries, however, especially in New England, that were sending out their products to other sections of the country. Thus New England linens, boots and shoes, clocks, and tinware were being sold from New York southward to Georgia. Also, there were a few industries where the beginnings of the factory type of organization were being slowly introduced; however, the use of the new machinery driven by steam power was seldom employed

and it can hardly be said that the modern factory had started before 1814 when the power loom was introduced at the Waltham cotton factory.

A beginning was made in 1790 when Samuel Slater, attracted to this country by the rewards offered for improved cotton machinery, set up at Pawtucket, R. I., an Arkwright mill for spinning cotton yarn. This relieved the difficulty in the industry due to the scarcity of yarn, and the success of this mill soon led to the erection of numerous others of a similar type. Though many of these failed, the number increased fairly rapidly, especially after 1807, and there were about 70 Arkwright water-power mills in the country in 1810, mostly located in southern New England. Though the supply of cheap cotton yarn thus made available greatly increased the use of cotton, "flax still outranked cotton in the ratio of 4 to 3 and wool in the proportion of more than 2 to 1 among the fabrics whose composition is sufficiently specified by the census for classification." At this period the use of power machinery for making yarn was chiefly employed on cotton and only slowly introduced in the case of wool.

The abundant yarn thus obtained was almost entirely woven into cloth in the household or in small shops, for in 1810 only 2 per cent of the cloth made in America was produced in factories. Thus it is evident that the shift to a factory-made product did not attain importance in cloth manufacturing until after the War of 1812. Outside of cotton spinning and the occasional use of the steam engine for motive power, there were comparatively few innovations of great importance introduced in the manufacturing industries of the country during these years. Such growth as took place followed old methods in the main; the real rise of the factory system is chiefly a product of later developments.

The Rise of Banking Institutions. One of the important developments in the economic institutions of the country during this period was the rapid growth of banks. Before the Revolution no banks of the modern type existed in the country; in 1790 there were only three in operation, one each in Philadelphia, New York, and Boston; one for Baltimore was chartered that year. The conditions that led to the establishment of the First United States Bank have already been described but some account of the growth of state banks remains to be given.

The rapid rise of state banks begins at the time when the United States Bank was established, eight state banks being founded during the same year. By 1800 the number in existence had risen to 28 with a capital of over \$21 million. They were located mostly in the seaboard section of the commercial states, over one-half in New England and only two south of the Potomac. The next five years, marked by great prosperity, saw the number of banks more than doubled and by 1811, when the charter of the United States Bank expired, the number had risen to 88 with a

capital of more than \$42 million. By that time several banks had been established in the commercial centers of the West. In most of the states some of the capital was raised by subscriptions to the stock by the states. This was done, partly with the idea of giving the state more control over the banks and of securing aid in its fiscal operations, partly to enable the state to share in the profits of the business, and partly to help provide the loanable funds so greatly needed.

The rise of banking institutions during this period was undoubtedly an aid and stimulus to the economic development of the country. These institutions promoted saving, made capital more mobile, furthered the use of credit, and in various ways facilitated the processes of trade and exchange. An important instrument in performing these functions was the issue of bank notes. Though the Constitution prohibited the states from issuing their own notes, the effects of this prohibition were in certain important respects practically nullified by the fact that the states were allowed to charter banks which could issue notes; as far as the people who were demanding easy credit and more money were concerned, this served their purposes just as well. It was chiefly through the issue of these notes that the banks extended their credit at this period, before the method of granting a loan in the form of a deposit credit against which the borrower drew his checks had appreciably developed; consequently a bank without the power to issue notes would have been severely restricted in its business. As a result these bank-note issues became an important factor in supplying the circulating medium of the country; in fact these notes probably became the chief circulating medium, for by 1811 the total note issues of the state banks had risen to \$22 million. The total specie supply of the country was estimated at between \$10 million and \$15 million and the notes of the Bank of the United States were about \$5 million.

Doubtless this addition to the money in circulation was one of the factors responsible for the rise of prices that occurred during the period, especially that during the years 1812-1814. Moreover, the use of this device was marked by many of the unsound or undesirable practices that characterized much of the banking of the period, abuses which were only partially restrained by the influence of the United States Bank. A more detailed analysis of the defects of the banking system that developed at this time will be postponed to the account of banking development during the succeeding period and the measures then taken to lessen these evils. At this point it will suffice to say that the outstanding evils were: the making of loans on security that was inadequate or improper for sound commercial banking, the failure to keep sufficient cash reserves to meet the demands of depositors or noteholders, and the consequent overissue of notes resulting in their depreciation and often in heavy losses to the

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holders. Thus another source of instability and chaos was injected into the circulating medium of the country, and many of the advantages obtainable by means of a banking system were lost through the failure to provide adequate control and adopt sound methods. These defects became more marked after 1811 when such controlling influence as the United States Bank had been able to exercise was removed and the outbreak of war imposed a new strain on the banking system.

The Outbreak of the War of 1812. The continued series of measures by which Great Britain and France were restricting American commerce and seizing American ships and the failure of the endless negotiations to obtain appreciable relief, together with the belief that the British authorities in Canada incited Indian attacks on the frontier and that Canada could be easily conquered, so increased the general feeling of irritation and injured pride in the country that when a younger group of statesmen, known as the "War Hawks," entered Congress in 1811 more positive action was demanded. This led to the declaration of war on Great Britain in June, 1812. It is notable that the strongest supporters of the war came from the West and the South; the commercial states of the North, especially the New England states, were generally opposed, partly, no doubt, owing to the fact that they had all along been more kindly disposed toward England, with which they were so closely connected commercially, but chiefly owing to the fear that war would destroy their commerce and carrying trade which, in spite of the foreign restrictions, had proved extremely profitable.

In the presidential election of that year, which was fought out on the question of the war, this conflict of sectional interests was sharply defined. The votes of the Western and Southern states were all cast for Madison; the New England states, Vermont excepted, voted solidly against him; the middle states, except Pennsylvania, showed a considerable majority for Clinton, the peace candidate. The opposition of New England continued throughout the war, and led to a practical refusal of that section to lend money to the government, and England, hoping to promote internal dissension, hesitated to blockade New England ports till the last year of the war. The movement culminated in threats of secession and the Hartford Convention of 1814. Thus the effective prosecution of the war was hampered by lack of a spirit of patriotism sufficient to rise above sectional interests; the provincialism of colonial times had not yet been fully outgrown.

Though the country was but ill prepared for the conflict the Congress which had voted for it adjourned without providing for any war taxes or for strengthening the navy which had been neglected and was so weak that it could not hope to compete as a unit with that of England. Although a few brilliant victories obtained in encounters between individual

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ships added prestige, they had little bearing on the outcome, with the exception of the victories on Lake Erie and Lake Champlain. In its land operations the country had hoped to accomplish most by invading Canada; but the regular army, of less than 7,000 men at the start, was poorly organized and the state militia failed to cooperate readily, so that none of the expeditions proved really successful.

England, on the other hand, was engaged with her allies in the last throes of the long-drawn-out struggle against Napoleon and, until that was settled, the war in America was for her a very secondary matter. When that struggle seemed nearing an end the United States, which practically from the start had been ready to negotiate for peace, and England, partly urged to it by her merchants anxious to have the American markets reopened, finally agreed in December of 1814 to terms of peace which left matters much as they had been at the start. After all, it was the ending of the Napoleonic wars that really put a stop to the practices that had drawn this country into the conflict. The results were thus inconclusive and, from the point of view of the country's ultimate economic development, of no very great significance; however, immediately and during the years directly following the war, its effects were widely felt in various branches of the country's economic life. For these reasons our account of the economic aspects of the war can be made brief and largely confined to the fields where the effects proved most significant.

The Financing of the War. In the main the government depended on borrowing to obtain funds for financing the war. The borrowing took two forms: the sale of treasury notes, mostly payable within a year and bearing $5\frac{2}{5}$ per cent interest, and the sale of long-time bonds. The total of the note issues amounted to over \$36 million, but the early issues were promptly paid off at maturity so that only a portion was ever outstanding at any one time. A dangerous sign which, had the war continued longer, would have had serious consequences, was the fact that the amount of these short-term notes outstanding steadily rose from year to year and reached over \$17 million at the end of 1815. They were not legal tender, and all but a small amount were in fairly large denominations, so that they did not enter into general circulation. Thus, although they did not result in the evils that had attended the issue of the Continental paper money during the Revolution, there is reason to think that, had the war been prolonged, the removal of restrictions might have led to similar consequences.

The long-term loans issued totaled about \$80 million. The first loan, issued just before the war began and bearing 6 per cent interest, was sold at par; the later loans had to be sold at a heavy discount. It was estimated that the specie value of the receipts from all these loans was only \$34 million, thus involving a very large loss to the government. The difficulty

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in selling the bonds and treasury notes was increased by the lack of any such large banking institution as the United States Bank, though the existence of the state banks provided facilities that had not been available during the Revolution. For the most part, too, the bonds had to be sold in the middle states, for the South had little ready capital and New England was too strongly opposed to the war to be willing to lend much to the government.

Taxation, as usual, was resorted to with great reluctance, the more so as the Republican party then in power had generally taken a stand against internal revenue taxes. Customs duties, previously the chief source of Federal revenue, were doubled at the start, but as imports soon dwindled to a small amount the receipts from this source fell to about one-half the usual sum. More revenue was essential, but Congress was slow to act and it was not until a year after the war had begun that a law was passed levying internal revenue taxes on carriages, refined sugar, licenses for distillers of spirituous liquors and retailers of wines and liquors, auctions and stamp taxes, estimated to yield about \$2 million. Although a direct tax of \$3 million was assessed on the states, it was not to be collected until 1814.

As the credit of the government fell, additional revenue became necessary and in September, 1814, the direct tax was doubled, many of the old tax rates were raised, a few new taxes were imposed, and the postage rates were doubled. Thus it was not until the war was nearly over that any appreciable amount was obtained from these sources, while the total sum derived from the internal revenue and direct taxes before the end of 1815 was little more than \$10 million. However, receipts from unpaid taxes and the continuance of other taxes brought in fair sums in the two following years till the last of the taxes were repealed in 1817. In addition to these sources the government received about \$1 million annually in miscellaneous revenue. As a result the total revenue of the government during the years of the war fell somewhat short of meeting half of the total direct expenditures, which have been estimated at around \$200 million; and the net increase in the debt of the country was about \$86 million. The very fact that this war did not involve more of a financial strain is an indication of the rather halfhearted way in which it was carried on.

Commerce and Shipping during the War. If we turn to the effects of the war upon the economic conditions in the country, it will be found that they centered largely about the effects on foreign commerce and shipping. This was especially so, since these branches of economic activity had been abnormally stimulated by the conditions existing in the preceding period, though this stimulus had been less marked after 1807. In April, 1812, as a measure preliminary to war, Congress enacted an embargo for nine

months. When war followed, the English navy commanded the seas and blockaded the coast from Connecticut southward. The rest of New England was not blockaded until the summer of 1814, partly in the hope of detaching that section from the rest of the country and partly because supplies from that section were needed by the British forces in Canada.

The British navy during the first of the war permitted large shipments of foodstuffs from the middle states to supply the troops then fighting in Spain and Portugal. Many ships escaped the blockade only to be captured later by a naval vessel or one of the many privateers that scoured the seas in search of rich prey. All told, some 1,300 American vessels were captured during the war. A slightly larger number of British merchantmen fell into the hands of the 500 or more American privateers that were sent out in the course of the war and even ventured to seize British vessels off the coast of England. Privateering afforded some outlet for American shipping, but the valuable neutral carrying trade was lost, and the steady decline of American commerce further augmented the difficulties of our shipping. In consequence the total tonnage of American vessels engaged in the foreign trade declined from nearly 950,000 tons in 1811 to less than 60,000 tons in 1814.

Even the vessels engaged in the coastwise trade were obliged to remain idle in the harbors, and goods were shipped overland where they could stand the heavy expense involved. The foreign commerce of the country steadily dwindled and by 1814, when the British blockade was extended to the New England coast from Rhode Island northward, it had almost ceased to exist. The total exports for that year were about \$7 million in value and included practically no reexports of foreign goods, as compared with total exports of over \$61 million in 1811, including \$16 million of re-exports. Though imports were not quite so seriously affected, they dropped from \$53 million to less than \$13 million during the same period.

The Reaction on Business Conditions. Such a sudden change in our foreign commerce from a period of abnormal stimulus to one in the course of which that commerce was almost annihilated naturally resulted in a great reaction on the general economic activity of the country wherever that was even remotely connected with foreign trade. Even the domestic interstate trade was seriously interfered with because of the danger of capture by the British along the coastal waterways that had been used for carrying the bulk of this trade. The frequent necessity for falling back upon the costly overland means of transportation tended to create marked divergencies between the prices of commodities in different sections of the country; thus flour worth \$4.50 a barrel in Richmond in the summer of 1813 sold for almost three times that figure in Boston.

The widespread and violent reaction of the war upon business is well indicated by the very rapid rise in the general price level during these

years. The result was to bring prices to a peak such as was approximated on only three other occasions in our history—during the Revolutionary War, the Civil War, and the first World War. As the severe contraction of foreign trade was so important a feature of this war, it is desirable to distinguish between the movement of prices on domestic goods and that on goods of foreign origin, which is shown for prices at Philadelphia, the commercial center of the time, by the chart on page 271. First it must be remembered that ever since the outbreak of the wars in Europe in 1793 prices in the United States had been maintained at an abnormally high level so that the rise during the War of 1812 started from a point about 50 per cent above that which had prevailed around 1792. The rise that took place during the war was naturally most marked in the case of imports. Advancing sharply after the outbreak of the war there was a moderate increase during 1813 followed by another sharp rise in 1814 which carried the level for that year to a point about 60 per cent above the 1811 level.

Domestic products, on the other hand, advanced very slowly until the close of 1813, then rose quickly and during 1814 maintained a level about 20 per cent above that of 1811. The return of peace in 1815 brought a sudden and precipitate drop in the price of imports while domestic goods continued to be sustained at their high level until the spring of 1817. In the case of both groups, however, it remained for the effects of the panic of 1818–1819 to bring prices down to the level prevailing in 1792; this was not reached till about 1823.

One result of the cutting off of imports was a great increase in the impetus to manufacturing that had started with the embargo in 1808. The effects of the scarcity of foreign goods were now augmented by the increased demand for many products arising from war needs. At the same time both capital and labor that had previously been so extensively employed in trade and shipping, particularly in the Northern states, were left idle and considerable portions of each were thus made available for manufacturing enterprises, to which they were promptly diverted. In consequence a large number of new manufactures started up. So great was the scarcity of many goods and so complete the protection afforded by the cutting off of imports that, even with the antiquated methods, relatively unskilled labor, and poor management, it was often possible, for the time being, to carry on these enterprises at a good profit. Although home manufactures were more slowly increased at this period, the most rapid development occurred in the workshop crafts or those industries just beginning to introduce factory methods. The latter in particular afforded a better prospect of quickly supplying the urgent needs of the country, so that the war considerably hastened the introduction of new methods in many manufacturing industries.

The war also brought important reactions in the field of banking. The winding up of the affairs of the United States Bank in 1811 widened the field for the operation of the state banks; in fact, in some places new banks were organized specifically for the purpose of taking over the business of that bank. Furthermore, the government, having previously chiefly depended on the United States Bank to act as its fiscal agent, was now forced to fall back on the state banks. The deposits of government funds in these banks made it possible for them to increase their note issues and loans, while the government's own needs for borrowing added to the demands for an expansion of credit on the part of the state banks. The resulting scarcity of lendable funds, by forcing up the interest rates, made banking more profitable and gave an added stimulus to expansion. Under these conditions the number of state banks rose from 88 in 1811 to 246 in 1816 and the note circulation which had been about \$22 million in 1811 increased to about \$100 million in 1817.

Reckless banking methods and expansion of credit were more than ever in evidence, at least outside of New England; and such conservative influence as had previously been exercised by the United States Bank was no longer operative. Specie steadily became more difficult to obtain; some \$7 million had been sent abroad to pay off the foreign stockholders in the United States Bank, and throughout the war there was a heavy drain on the supply available in the South and West. Consequently, when in 1814 the British landed in Chesapeake Bay and burned the Capitol at Washington, the shock was too much for the overextended credit structure and specie payments were suspended by the banks outside of New England. This action facilitated further expansion of the note issues and specie rose to a premium of 15 to 20 per cent. When the small change disappeared, since the banks were not authorized to issue notes of a less denomination than \$2, quantities of illegal issues of paper notes were put out, often by merchants, tavern keepers, stage drivers, and others.

The government was seriously embarrassed by its inability to get specie from banks in which its funds were deposited and in the few years immediately following is estimated to have lost some \$5 million through the depreciation of the money that it received. This inflation of the currency was a factor in bringing about the rapid rise in the general price level of the period, while the chaotic conditions resulting from the reckless banking methods resorted to increased the demand for the reestablishment of the United States Bank, which was finally provided for just after the war ended.

It is obvious that the abnormal conditions in the economic life of the country created by the war would involve extensive readjustments on the return of peace. Manufactures had been abnormally stimulated; com-

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merce, shipping, and some branches of agriculture seriously depressed; and the circulating medium and credits had been inflated. All of this had resulted in marked alterations in the values of different commodities, the general level of prices, and in profits. The ending of the war, necessitating a rapid readjustment to more normal peacetime conditions, inevitably resulted in a widespread reaction during the years immediately following; and the difficulties of those years are properly to be considered as a part of its aftermath. They can be more conveniently described, however, in connection with the account of the events of the succeeding period in which they merge.

Summary of the Economic Development, 1765–1815. Before turning to the new epoch in the economic history of the country, which begins with the year 1815, it is desirable to summarize the results of the economic development that had taken place since the end of the colonial period. The central problem with which our study is concerned, it must always be borne in mind, is: how the American people have proceeded in the efforts to satisfy their economic wants and by what means and methods they have succeeded in supplying those wants more completely and more economically. The progress that had been made in these respects during the period from the outbreak of the Revolution to the end of the War of 1812 is therefore the chief concern here.

As has been pointed out, abnormal conditions arising out of wars were generally the dominant forces in shaping the immediate course of events in the economic as well as the political life of the people during these years. The immediately resulting developments often ran contrary to, or were at variance with, what was destined to prove the more normal course of the country's economic development. Moreover, there were not a few cases where these conditions and forces eventually turned out to exercise considerable influence over the course of the later more normal development. Besides those forces and conditions which we have called abnormal, there were other developments taking place that were a part of the more normal evolution of industrial society and that arose primarily out of the efforts of the people to introduce more economical methods for supplying their wants. These changes took place more slowly; their results were often lost to view under the rapidly shifting course of the disturbed surface of events; yet they were the deeper underlying changes which in the long run were destined to be the most important factors in furthering the economic development of the nation and the material well-being of the people. What developments of this type were taking place during these troubled years?

First, we may note the revolutionary changes in the framework of government destined to prove of such fundamental importance eco-

nomically as well as politically. The effort to secure united action in the opposition to the oppressive measures of Great Britain after 1763 helped to break down the barriers of provincialism theretofore so dominant. The Revolutionary struggle necessitated such action, though provincial jealousies were only too evident even then; and the attainment of independence, ending all British control, by bringing a new republic into existence, provided the ideal about which the new spirit of nationalism could rally. The obvious and inherent weakness of the new government set up under the Articles of Confederation still reflected the provincial spirit of colonial days and finally compelled the reluctant states, by what seems little less than a miracle, to agree to the adoption of a new Constitution. Under this they surrendered to the Federal government the minimum of powers then deemed essential to its successful functioning in furthering the economic and political development of the nation.

Fortunately, too, in these early years the first three administrations, being under control of the Federalist party, were devoted to building up the power of the central government. Even the succeeding Republican administrations, founded on opposition to such a policy, often found it expedient in practice to accept what had been accomplished, while the more enduring influence of the decisions of the Supreme Court under the leadership of Chief Justice Marshall greatly strengthened the Federal authority. Though internal dissension still cropped up, and even threats of secession, as in the West or New England, yet even these had a broader sectional basis than the narrow provincial one of colonial times.

The era of good feeling that followed the end of the War of 1812 may be said to have marked, at least for the time being, the general acceptance of the authority and powers then exercised by the Federal government. Thus in the governmental framework of the social order this period of transition brought the most revolutionary changes by displacing the unconnected and relatively autonomous provincial governments, subject only to such limited control as the distant king and Parliament sought to exercise in their own interest, for an independent nation under a central government to which the states had surrendered such powers as were then deemed essential to its success. This achievement was the first step towards the working out of a national economic order.

Another development in the political order during this period that was certain to have important reactions upon the economic order was the marked trend towards a more representative and democratic type of government. The discontent of the unenfranchised or inadequately represented masses, which had played no small part in the revolutionary movement, had exercised its influence in securing extensive modifications of the evils of colonial times in the new framework of government, both state and Federal, that emerged from the upheaval of the struggle for

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independence. Although most of the leading statesmen of the time still evinced a marked distrust of the masses so that property qualifications for franchise rights were generally retained until swept away by the subsequent wave of Jacksonian democracy, it must be recognized that by 1815 the existing form of government was better representative in character and much more responsive to the popular will than that of 1775. That such a shift in power would inevitably lead to important reactions on the economic life, since in no small measure it had been sought for that very purpose, was to be expected. Very naturally it was promptly employed to secure a more equitable distribution of wealth and economic opportunity.

Once the basis for a spirit of nationalism and an efficiently functioning central government had been secured, governmental action to further economic development along many lines was made possible. The prestige and power of the central government, enormously increased by the right of taxation, enabled it to attain a fairly sound fiscal position and gave it resources to finance many useful activities otherwise impossible. The Federal government's acquisition of a vast public domain, though less significant immediately from the fiscal point of view, made possible the centralized control over this territory and proved a nationalizing influence. In the exercise of the new powers granted by the Constitution complete freedom of domestic trade was established, whereas the control over foreign trade, shipping, and treaty arrangements was employed to further development in that field. The provision of a uniform coinage, the development of the postal system, the creation of the United States Bank, the construction of important roads, the provision for patents and copyrights, the establishment of a uniform system of weights and measures, and the setting up of the Federal courts were all measures whereby the new government was able to further economic progress.

The economic resources of the country were augmented during this period in various ways. The natural resources were increased by the acquisition of the vast and rich Louisiana Purchase, though immediately this was chiefly important for control of New Orleans and the Mississippi River. The growth of population, both through immigration and the natural increase, added to the supply of labor. Migration to the West began the development of the untouched resources of that region, which the adoption of the public land system had made more accessible. The steady increase in the annual production of wealth, and especially the abnormal demand for American products and shipping during the prolonged European wars, made possible greater savings and helped, with the added foreign investments, to augment the accumulations of capital available for productive purposes. Meanwhile progress in science

and the arts had provided new inventions and added knowledge had made possible a more efficient and economical use of these varied economic resources. New and important crops, notably upland cotton and sugar, had been introduced in agriculture and some improvements in the methods of farming, but more important were the innovations in manufacturing. The very rapid expansion in this branch of industry after 1808 was especially significant as helping to make the nation more self-sufficient economically.

In the economic organization of the country important developments had been made in various lines. The improvements in transportation facilities, chiefly in the form of more and better roads but including the beginnings of canal construction and the use of steamboats, helped to reduce costs of transportation, widen the markets, stimulate trade, and consequently increase territorial specialization and the division of labor. The better transportation facilities also improved the means of communication and, together with the development of the post office and the growth of newspapers, marked another distinct advance in the country's economic organization.

In the field of financial institutions progress was being made in various ways. The establishment of the mint and the coinage of specie, though not sufficient to meet the real needs of the country, were a step in advance toward providing a sounder and more uniform circulating medium. More important, however, was the rapid development of banking institutions that took place during this period. The notes issued by these banks became the chief circulating medium of the country; but the uncertain value of many of them still proved a source of trouble and serious injustice, which partly offset the gain from the elimination of the various paper money issues of earlier times. The banks were useful in other ways as well. They facilitated the development of credit. They provided an organized market where the surplus savings of individuals could be brought together to create a basis for loans to borrowers who needed capital to carry on various enterprises; thus they not only stimulated saving but made capital more mobile and facilitated its distribution among industries where it was likely to prove most productive. In spite of the fact that many unsound practices and serious defects prevented the banks from functioning in the most efficient manner, the growth of these institutions marked an important advance toward a more effective organization of the economic order of the time.

Finally, we may note that out of the spirit of liberty and democracy that underlay the Revolutionary movement there developed various changes tending to create a greater degree of industrial democracy—conditions that made for greater equality of economic opportunity among the people. We must never forget that the economic well-being of a nation

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is concerned not only with the problem of obtaining the largest output of goods in the most economical manner but also with the conditions under which that output is distributed among the people. The most important development of this character during these years was the marked shift in the distribution of wealth that attended the Revolutionary upheaval. The rapid progress made in the abolition of slavery in the Northern states was an essential step in advance though affecting but a small group. The abolition of the system of primogeniture was a step in the same direction. The opening up of the public domain and the sale of state lands on fairly easy terms widened the field of economic opportunity available to those prepared to face the hardships of pioneer life. The new steps taken to provide an elementary education at the expense of the state, though very limited in scope at this period, marked another gain.

In these ways, as well as through the increase in economic resources and the improvements in economic organization, this troubled period brought progress in the economic development of the new nation. Certainly the economic order that had been developed by 1815 showed a great advance over that which had existed in 1775. On the foundations laid down during this period of transition an essentially national economy based on a more efficiently functioning economic and social order was emerging in place of the provincial organization of the colonial period. In the era of peace that followed, and as soon as the reaction from the war was over, the country was able to build with results that amazed the world.

PART III

WESTWARD EXPANSION AND THE RISE OF A NATIONAL ECONOMY, 1816-1860

CHAPTER XVI

THE PERIOD IN GENERAL AND THE WORLD BACKGROUND

Nineteenth-century Tendencies. With the end of the long and exhausting Napoleonic wars the western world thankfully saw the return of peace. Although the century that followed brought frequent wars, they were for the most part brief and the ripple of their effects, if in some ways spread over a large area, was less convulsive in consequences. A hundred years passed by before the whole western world was again drawn into a struggle that permeated and greatly altered the economic life of all civilization.

In other fields of social life this century was destined to witness changes which, if slower, were in the long run more revolutionary in effect and of greater significance to mankind than any wars. With the brief perspective we possess today it is not easy to pass judgment but it now appears that the nineteenth century will stand out prominently as among the most remarkable that the world had ever seen for the extent of the changes that occurred. Among those that make the century so significant in world history—perhaps the greatest of them all, though we must remember that each reacted upon the others so that no one change was really independent—was that taking place in the economic life of the times. It is particularly important for our purposes, therefore, to know the significant world developments of this period, as a background to an understanding of the economic history of the United States.

If we were to list the great developments of the nineteenth century that were of special significance in shaping the economic history of the world during this period, we might enumerate them as follows:

1. The progress in science and the application of this knowledge in industry through invention. From the purely economic point of view this was the most important development of the century, especially so since it underlay most of the other changes. The introduction of new sources of

motive power such as steam, oil, and electricity, the new machinery devised, the resulting rise of the railroad, the steamship, the electrical devices for the transmission of power or for communication, and the whole modern factory system revolutionized the economic life of most of the world in a comparatively brief period of time. The unparalleled material progress attained through these changes and their reactions on the social order have led people to speak of the period as the Age of Materialism. Because these sweeping changes reacted upon all phases of social life, a study of the economic history of the century is fundamental in understanding the political and social history of this period.

2. The rapid increase in the population of Europe and the great migration of the people of Europe to the less developed regions of the world carrying with them their civilization and culture. It is estimated that in the years between 1821 and 1932 around 60 million people left Europe for some other continent; about 57 million of them went to the New World and 34 million to the United States. Yet, despite this great emigration, the population of Europe, which was less than 200 million in 1800, had more than doubled by 1900 and by 1933 was about 520 million.

3. The rapid increase in the accumulated wealth and capital of the world and the great outflow of capital from the richer nations of western Europe to the more backward countries of the world. The wealth accumulated by each generation and handed on to the succeeding generation greatly increased the productive capacity of the world. Capital and its control became increasingly important factors in the whole social process.

4. The growth of a demand for greater economic freedom—the tendency toward a policy of *laissez faire* on the part of the state as contrasted with the previous elaborate system of regulation and control. This was a result, in part, of the fact that the old regulations proved ill adapted to the new methods and conditions which were so rapidly changing the economic life of the period. These changes created new problems and, before the century was over, led to a demand for many new forms of state control.

5. The growing spirit of nationality and the rise of large and powerful nations or empires in whose political life economic interests and international economic rivalries played an important part.

6. The rising spirit of liberty, democracy, and humanitarianism; the demand on the part of the masses of the people not only for greater political power but also for a greater degree of economic liberty, industrial democracy, and social well-being. These demands were destined to play an important part in shaping the economic as well as the political and social history of the century.

Bearing in mind these outstanding features in the history of the nineteenth century, we can now turn to a brief survey of the actual course

of economic development outside of the United States during the portion of that century up to 1860 with which we are now concerned. Because the United States was more immediately reacted upon by the economic development of western Europe, we shall first survey the changes taking place in the three leading nations, Great Britain, France, and Germany, and then briefly summarize the events in other parts of the world that are most significant for our purposes.

Great Britain in the Nineteenth Century. The nineteenth century marks the rise of Great Britain to a position of economic dominance among the nations. In the seventeenth century she ranked behind France, Spain, and Holland in economic importance, though growing rapidly. In the eighteenth century she was still behind France in population, wealth, industry, and commerce. During the course of the nineteenth century she forged ahead of her ancient rival in all these respects, and until the latter part of the century retained an undisputed preeminence in economic resources and progress among the nations of the world. This was England's great century. How did it come about?

The prolonged period of internal troubles and foreign wars, from the outbreak of the French Revolution to the final collapse at Waterloo, left France disorganized and exhausted; her recovery required well-nigh a generation. These same wars had saddled England with an enormous debt, but, safe in her island stronghold with the establishment of her firm command of the seas, she had escaped the heaviest losses from the ravages of war that fell upon the Continent; and her commerce, though at times impaired, still spread over the seven seas. At the same time she was rapidly perfecting and introducing the remarkable series of technical inventions which, by the end of the Napoleonic period, placed her in the position of leadership in manufacturing among the nations of the world. (See the chart on page 509.)

Partly as a result of the consequent economic development a rapid growth of population occurred, the total for the United Kingdom rising from about 15 million in 1801 to 29 million in 1861 in spite of a large emigration, chiefly to America. In England and Wales, where nearly all of this increase took place, the population rose from less than 9 million to 20 million between these two dates. In other words, the increase in the absolute number of inhabitants in this brief period of 60 years was greater than the growth attained in all the preceding centuries. Although greatly augmenting the labor supply and thus the productive capacity of the country, this growth, in view of the limited area and resources of the British Isles, created serious problems in providing the necessary food and devising means for getting a living for all these people.

The Industrial Revolution and Its Consequences. The period that is known as the Industrial Revolution in England is commonly said to in-

clude the years between 1770 and 1830. During these years the steam engine was made available as motive power in factories, coal began to be used for power and the great coal resources of Great Britain were rapidly developed, tools for making machines were invented, mechanical engineering arose, and great progress was seen in industrial chemistry. In consequence of the new methods and machinery introduced, many industries, notably the iron and steel and cotton manufactures, and more slowly the woolen manufacture, were revolutionized. The old domestic system of industry, which had attained such an extensive development, especially in the manufacture of woollens, was steadily undermined and the factory system arose in its place. The new machinery, combined with the economic reaction due to the Napoleonic wars, deprived many people of their work, caused great suffering among them, and led to outbreaks of violence which involved the destruction of many machines. The loss of large foreign markets during the Napoleonic wars added to the difficulties of this period and, although the return of peace was immediately taken advantage of to sell the large accumulated stocks of goods both in the United States and on the Continent, the textile industries at least still faced years of serious depression until about 1830. By that time England had firmly established her position of leadership in manufacturing and thenceforth the rapid expansion of her manufacturing industries was the most important factor in her economic development.

One result of this expansion was to absorb not only the workers who had previously been engaged in the domestic and home industries but also a steadily increasing proportion of the total population, although that population grew at a rapid rate. The old laws and customs developed under the earlier methods of production were generally repealed or abandoned and labor attained greater freedom than ever before. But the introduction of new machinery and the factory system created new problems as well. The work of women and young children was diverted from the home to the factory and the coal mine, where the hours were long and the conditions often unhealthful. Although the strain, the intensity, and the monotony of work checked both physical and mental development, it must not be assumed that the conditions of homework had been by any means ideal. At the same time the great manufacturing centers of the Midland and the North developed and more and more of the population were herded together in the rapidly rising industrial cities, creating the new problems, economic, political, and social, of the modern city. These problems arising from the introduction of factory methods and the growth of urban population led to a demand for labor legislation and better safeguards to protect the health of the city. This marked the beginning of a new field for the activity of the state in relation to industry.

One important factor in England's development during these years was the great improvement in the means of inland transportation and communication. The fact that few places were very far distant from navigable rivers or the coast had always been important in furthering the growth of trade, for overland transportation was difficult and expensive. In the course of the eighteenth century, and especially in the early nineteenth century, a marked improvement took place in the character of the roads. Another great advance came with the construction of many canals or the canalization of rivers between 1761 and 1860, often making possible a reduction of three-fourths in the costs of transportation. Finally came the railroads, starting in 1825. As a result of the rapid construction in the forties, nearly 7,000 miles had been opened by 1850, providing a system that connected all the larger cities. Through these improvements the markets for both agricultural and manufactured products were widened and the tendency toward division of labor and specialization increased.

Along with the resulting increase in trade and commerce, in part aiding that increase, occurred a rapid development in banking institutions, and joint stock banks began to spread. The banking system of Great Britain became more advanced than that of any other country at this period. At the same time the wealth and accumulated capital of the country, which had grown rapidly during the preceding century, now mounted even faster. London became the great financial center of the world in place of Amsterdam; the Continental countries went thither to borrow and British capital flowed out to other lands in an ever-increasing stream.

The agriculture of England was also going through a rapid transformation at this period. Marked improvements in methods had been introduced in the second half of the eighteenth century, through new crops, a better system of rotation that did not necessitate letting the fields lie fallow every two or three years, and better practices in the breeding of livestock. But these improvements, involving more intensive methods of cultivation, could not easily be introduced under the open-field system that prevailed in many sections and this was partly responsible for the movement on the part of the landowners to enclose their great estates. In consequence many of the yeomen or small tenant class lost their holdings and were forced to seek a living in the rising industrial centers or else emigrate.

At the end of the Napoleonic wars almost half of the male workers in England were engaged in agriculture and the country was almost able to supply its own needs for food in ordinary times. From then on the rapid growth of the population and the rising percentage engaged in non-agricultural pursuits made it increasingly difficult for the country, in spite of the considerable increase made in the production of farm prod-

ucts, to secure a sufficient food supply from within its own borders. At the same time duties on imported foodstuffs tended to increase the cost of living and so were opposed, not only by the industrial workers but also by the manufacturers, who felt that this necessitated the payment of higher wages. The frightful famine which occurred in Ireland on the failure of the potato crops 1845-1846, when hundreds of thousands died of starvation and others escaped only by emigration, brought this problem home to the nation in the most vivid and ghastly manner. These developments led Great Britain in 1846 to abandon the old policy of protection to agriculture embodied in the corn laws and increasingly to seek cheap food for her growing population from foreign lands.

Commerce and Commercial Policy. It was inevitable that these developments in the economic life of Great Britain should result in corresponding changes in her commerce and commercial policy. As the great manufacturing industries arose it became necessary to secure more and more of their raw materials from other lands, for England's natural resources were very limited in amount as well as in variety. Coal she possessed in abundance, but this was the great exception. Even the domestic supply of wool, which for 400 years had been the great staple export of the country, now proved insufficient to meet the needs of her manufactures. Timber and other supplies for the shipbuilding industry along with iron ore she had long been importing and the newly risen cotton manufacture added another great staple to the list of important raw materials she was forced to obtain from other lands. At the same time the rapidly growing output of her manufactures necessitated finding new foreign markets in which to dispose of the surplus products; and the superior efficiency of England in many lines, enabling her to turn out these products at low costs, increased the demand for her manufactures from other parts of the world. As a result England's foreign commerce was coming to consist more and more of imports of raw materials for manufacturing and of foodstuffs for her manufacturing population and her exports showed a growing preponderance of finished manufactures. All this also resulted in a steady increase in the relative importance of foreign commerce in the economic life of the nation.

England Enters the Stage of International Economy. At bottom all these developments simply meant that England as a nation was coming to specialize in manufacturing, the line of economic activity in which she then had the greatest relative advantages. But specialization on the part of a nation, just as in the case of an individual, necessitates an exchange of goods with others. It results in a growing dependence on others who will buy the goods turned out by the nation that has specialized and will supply it with what it wants and does not produce itself. Thus England was passing out of the old stage of economic development where, rela-

tively speaking, she had been self-sufficing as a nation—a national economy. She was entering a new stage which we may call an “international” economy, in which as she specialized more and more in manufacturing she became increasingly dependent upon other nations to supply her with raw materials and foodstuffs and to take from her in exchange the output of her manufacturing industries. Thus foreign trade became vital for her existence.

Such a step in economic development confronts a nation with most momentous problems for it involves serious dangers along with its many advantages. Had England chosen to remain more nearly self-sufficing, it would have checked the growth of population and wealth and to that extent made her less powerful politically; but the nation would have been less dependent economically on the rest of the world. On the other hand, by specializing in manufacturing and the resulting trade, it was possible to sustain a much larger population in the British Isles, to accumulate a greater amount of wealth, and to enjoy a higher standard of living. The dependence on foreign trade which this involved was the vital point of weakness, the Achilles’ heel, in the situation; for, if in time of war that trade with the rest of the world were cut off, the nation faced ruin and starvation, a possibility only too vividly brought home to England during the first World War. To prevent such a possibility, as well as to protect her empire, England had to maintain control of the seas. This she had finally established during the Napoleonic wars; ever since it has been her policy to retain it. With the recent development of aerial warfare, however, it is obvious this defense will no longer suffice. In spite of its dangers specialization was the course of economic development that the nation chose, or at least drifted into. It was in line with the predominant trend of economic development toward a more nearly world-wide economy which is shown in the whole course of history.

The Adoption of Free Trade. It has previously been pointed out that specialization is limited, among other things, by the extent of the market; anything tending to put obstacles in the way of trade will limit the extent of the market. Thus the success of England’s efforts to develop her manufacturing industries seeking an outlet in the world’s markets logically involved a modification of the protective mercantilist policy that had imposed so many restrictions on the freedom of foreign trade. More specifically it was clearly desirable for English manufacturers to be able to obtain the raw materials, so many of which were imported, at the lowest cost; hence import duties on such commodities were opposed. Similarly it was realized that, as the domestic supply of foodstuffs became insufficient and additional supplies had to be imported, the import duties on foodstuffs, especially those on grain known as the corn laws, would increase the cost of food and tend to necessitate paying higher wages to

the workers. The resulting higher cost of the manufactured products would make it more difficult to sell them in the markets of foreign countries. Finally, it was argued that, since English manufacturing industries were more efficient in most lines than any others in the world, they no longer required protective duties and that, if England abolished these duties along with the others, foreign nations might be induced to reciprocate by admitting English manufactures to their markets on more favorable terms.

These arguments were all a part of the current reaction against the Mercantilist System of extensive state regulation and control, and in favor of greater freedom of trade which dominated English economic thought at this period and led to the rise of the so-called "Manchester School" favoring a policy of *laissez faire*. This reaction in theory was undoubtedly in part a result of the changed condition in industry that made the old system of regulation, however justified originally, unsuited to the new conditions; in part its teachings were a cause for the changes in policy that followed.

The actual legislation that embodied this change in commercial policy can best be summarized as grouped in three periods. In the first period, 1825-1828, under the leadership of Huskisson, most of the restrictions on exports were removed, the duties on raw materials were removed or reduced, and the duties on imports of manufactures considerably reduced. In the second period, 1842-1846, under the leadership of Peel, many other duties were reduced or abolished, including those imposed by the corn laws, the latter becoming effective in 1849. Finally, in the third period, 1853-1860, under the leadership of Gladstone, practically all that remained of the protective system was swept away and England became a free-trade nation.

The Merchant Marine. The great growth of foreign commerce necessitated a larger merchant marine. This need not only stimulated the development of shipping and shipbuilding but also wrought, together with the movement towards free trade, a change in the policy embodied in the old Navigation Laws. The British merchant marine suffered during the period of the Napoleonic wars and for some time afterward its growth was slow. But with the expansion of British trade in the thirties and forties the rate of growth was greatly accelerated and by 1860 the registered tonnage was nearly double what it had been in 1815. The slow introduction of iron in the construction of ships and of steam for motive power, scarcely starting before 1840, was a change destined eventually to be of great advantage to British shipbuilders, though the results were only just beginning to be felt before 1860.

Throughout this period the merchant fleet of Great Britain dominated the ocean-carrying trade of the world; yet it found itself facing a growing

competition, chiefly from the shipping of Baltic ports, of the Scandinavian countries, and of the United States. Under such circumstances it would not have been surprising to see the country adopt measures to provide greater protection for her shipping interests, especially in view of the fact that the trade of the British Empire made up such a considerable portion of the world's ocean-borne commerce that its control provided an unsurpassed basis upon which to build up a protected merchant fleet. Yet the policy pursued was the reverse and the protective system embodied in the old Navigation Acts was entirely swept away.

The outcome was largely a result of the general movement toward freedom of trade that prevailed at this period. Although the general principles underlying the old Navigation Laws were commonly accepted as a part of British policy down to about 1845, considerable modifications in their actual application to different branches of trade had been effected long before that, as in the case of the United States after the Revolution. Still more important concessions were made in a series of commercial treaties negotiated between 1815 and 1860, facilitated and hastened by the fact that other nations were anxious to make reciprocal concessions. The desire to secure reductions in foreign customs duties and stimulate trade was one of the most important, if not the most important, consideration involved. The effect of the navigation laws of different countries in producing long lines of ships sailing around the seas in ballast, because they could not get a cargo that they could legally carry, increasingly impressed people with the great economic waste that the system involved. Furthermore, when England adopted free trade, her colonies lost the advantages of more favorable duties on many of their products imported into England than were imposed on similar commodities of foreign origin; and they began to demand, as partial compensation, the abolition of the Navigation Laws in the hope that foreign competition would bring some reduction in the rates on ocean freight.

The end came quickly. In 1847, as a result of the Irish famine, the Navigation Laws were temporarily suspended; in 1849 they were repealed, except for the coastwise trade and the requirement that three-quarters of the crew be British subjects. Even these restrictions were removed in 1854. This rapid abandonment of a policy upheld for several centuries and long looked upon as the very palladium of British sea power was not adopted without opposition. Naval officers still feared it would weaken the navy, though other developments had somewhat modified their alarm. The shipping interests prophesied that "the Americans would become the great carriers of the world." But the opposition was overwhelmed by the growing influence of the trading and manufacturing interests of the country.

The Expansion of the Empire. The expansion of the British Empire during these years was closely connected with the economic development of the British Isles. The Napoleonic wars had brought new colonies to England including British Guiana, Cape Colony, and Ceylon. Thereafter, until the last quarter of the nineteenth century, the keen struggle for colonies that had marked the international rivalries of the preceding centuries fell into the background. Doubts arose as to the advantages of such possessions, particularly in England. It was pointed out that only too frequently they were lost to the mother country, as in the case of the United States, or the colonies of France and Spain in America, or many of those of Portugal in the East. It was also argued that the advantages of their trade could be enjoyed just as well without political control, and England's trade with the United States was given as an illustration. Thus, as far as the British government was concerned, no well-defined and vigorous policy of expansion was followed during these years. Private initiative, however, was active and played an important part not only in the economic development of the Empire but in that of the whole world as well, notably so in the case of newly developing continents.

The steadily mounting stream of emigrants, reaching figures of 200,000 to 300,000 a year after the Irish famine, flowed out, at first chiefly to Canada, whence grain and lumber were returned to England. The limited resources then available in Canada and the difficulty of access to the Canadian West resulted, after about 1834, in the majority of emigrants being diverted to the United States. A smaller stream turned to Australia, where the range sheep industry was the chief attraction and furnished the staple export until the gold discoveries of the fifties added the great output of the mines to that of California and reacted on the price level in the world's markets. A still smaller group went to Cape Colony and in time began to send wool to England. Densely populated India offered little attraction to the typical emigrant; but the East India Company steadily extended its control over the native states. After the company's monopoly of trade was abolished in 1813 and the field was thus left free to private enterprise, a rapid development of that colony's commerce took place and many traders went out to take advantage of these opportunities.

Alongside this emigration of the English people went a steadily increasing volume of English capital, often under the guidance and control of engineers, traders, and various types of entrepreneurs. This capital, seeking in less developed lands a higher rate of return and greater opportunities than were to be found in England, spread to all parts of the world and brought in, through the annual returns to the owners, a rapidly mounting stream of wealth. The growing mobility of

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labor, capital, and business enterprise which these movements reflected helped to hasten the economic development of the world as well as that of the British Empire.

The Development of France to 1860. Until near the close of the eighteenth century France was the richest and most powerful nation of western Europe. The chaos of the French Revolution followed by the prolonged and destructive Napoleonic wars exhausted the country and set back its development for fully a generation. Colonies were lost, commerce was dissipated, industry checked, and vast resources wasted. When France finally emerged from the struggle, her position of economic supremacy had passed to her age-long rival, Great Britain.

However, this trying period was not without some results eventually advantageous to her economic development. Many of the old institutions, habits, regulations, and laws that had checked development were swept away; the burdensome and unequal taxes, the restrictions on manufactures and commerce, and the concentration of land ownership were modified or cast aside altogether as unfitted for the social ideals and the changing economic conditions of the time. Yet the process of readjustment was difficult and it took time for the beneficial results to develop.

The population of France continued to increase, but at a much less rapid rate than in England, the total rising from about 27 million in 1800 to over 36 million in 1860. The greater portion of the inhabitants was engaged in agriculture; of this group a much larger proportion than in most European countries was made up of peasant proprietors owning their own land. The industry, thrift, and frugality of this class was one of the most important economic assets of France. Improvements in agriculture came very slowly. During this period some progress was made through the introduction of better grades of livestock and new crops such as the sugar beet and the potato; and a better system of rotation made possible a considerable reduction in the amount of land left fallow every year. Aided by these changes the increase in the country's food supply fairly kept pace with the growth of population and France remained practically self-sufficing as far as food was concerned. Even in the middle of the century, it could be said that methods of cultivation showed no very revolutionary changes as compared with those in practice a century or two before.

Agriculture as well as industry was greatly benefited by the improvements made in transportation facilities. Even in the eighteenth century the road system of France was much superior to that of other countries and the beginnings of a canal system had been introduced. From Napoleon's time on to the middle of the nineteenth century the roads were improved and the canal system rapidly extended. But by this time the success of the railroad had been well established and, aided by the govern-

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ment, a system including the main trunk lines had been practically completed by 1860.

Beginning with the decade 1825-1835, the new developments in manufacturing methods were only very slowly introduced in France. High duties on machinery checked its use and by the middle of the century the total horsepower in mines and factories supplied by steam engines was probably not greatly above 65,000. Though the most marked changes occurred in cotton manufacturing, the silk and woolen industries also showed progress. Lack of known and available resources of iron and coal limited the growth of iron manufactures and the output was barely 600,000 tons by the middle of the century. At that period large industrial enterprises produced but a small portion of the total output of manufactured products most of which was consumed within the country, the silk manufactures being the only important export in the group.

Napoleon had sought to develop French industries and, aided by the blockades of the war period, a rapid expansion took place. As is so frequently the case after war, the return of peace brought a demand for protection for these industries and the agricultural interests also sought similar aid. The result was the adoption of a policy of high protection for both agricultural and manufactured products, often involving absolute prohibition of imports. This policy was continued without substantial change until about the middle of the century when, under Napoleon III, a series of changes very considerably modified the rather extreme duties that had theretofore prevailed.

This restrictive commercial policy was among the factors that checked the growth of the country's foreign commerce. It was not until the thirties that the value of the foreign trade again equaled the figures attained in the preceding century; after 1850, stimulated by the rising price level and the greater freedom of trade, it mounted rapidly; by 1860, though barely three-fifths of the value of that of Great Britain, it was greater in amount than that of any other country. The merchant marine showed even less progress. It had been practically annihilated during the Napoleonic wars and, in the face of the keen competition from other countries in the following period, its growth depended largely upon the expansion of the country's foreign trade and such protection as was afforded by law. In 1850 it carried less than half of the country's foreign trade and, in spite of rapid growth in the following decade, it included barely 1 million tons in 1860, making it third in rank among the merchant fleets of the world, but still far below those of Great Britain and the United States. Thus in many respects the France of the middle of the nineteenth century had lost the preeminent position that she had enjoyed in the economic world of the eighteenth century.

The Development of Germany to 1860. The development of Germany during this period was of significance less for its actual reaction upon the rest of the world at the time than for the later growth for which it helped to prepare the way. At the close of the eighteenth century Germany could hardly be called a nation; rather it was a jumble of little states, principalities, and cities which the Napoleonic wars reduced from over 300 to 38. Economically not much progress had been made since the middle of the seventeenth century. Agriculture was the main pursuit of the great portion of the population, though many cultivators of the soil also turned out home manufactures. In the more populous sections skilled craftsmen plied their various trades on a small scale. There was mining, and in the few ancient trading cities the merchants enjoyed a share in the limited international trade of the day. In the main an essentially provincial economy prevailed.

The devastation of the Napoleonic wars fell with especial severity upon the German states, though not without some final gain. For the historian must recognize the fact that the social upheavals of a prolonged war frequently supply the needed impetus for the breaking up, modification, or casting aside of old customs, methods, or institutions, political, social, and economic which, however desirable originally, have been long outgrown, yet which still remain to check progress because of the power of vested interests, or a spirit of conservatism, or the mere inertia of social institutions. Tremendous as may be the cost, unnecessary as may seem the method, uncertain and unexpected as may be the results, we must still recognize that history affords many illustrations of the point that, in fact, this is the way by which such changes are often brought about.

In the case of Germany the war hastened the political unification of the multitudinous German states. Through the reforms of Stein and Hardenberg, 1808-1811, it helped to free the serfs on the land; it also served to weaken the monopolistic control of the guilds in many of the industrial centers. Yet the changes thus made possible brought appreciable results only very slowly. The larger landowners, particularly those in the East possessing more capital and initiative and securing more complete control over the use of their land, were steadily introducing better methods; the conservative peasant classes tended to adhere to the old traditional ways. In the manufacturing industries little progress was made in introducing the new machinery and factory organization until the middle of the century. The population of the country increased from over 24 million in 1800 to nearly 38 million in 1860, showing a rate of growth considerably below that of Great Britain but greater than that of France; so that by the end of this period Germany had surpassed France in total population.

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Perhaps the most significant actual developments of the period came through the abolition of the innumerable tariff barriers and restrictions on internal trade and the introduction of better means of transportation. Under the leadership of Prussia there was organized the Customs Union, or *Zollverein*, in which a group of states joined together in abolishing the customs duties on trade between members of the group and levied moderate duties on products imported from elsewhere. By 1834 the Customs Union included about three-quarters of modern Germany; by 1860 it embraced nearly the whole of the country. Whereas the duties levied showed a tendency to provide protection to manufactured products, particularly those facing English competition, the general level of the rates was very moderate.

The expansion of markets which the abolition of restrictions and taxes on internal trade promoted was also furthered by the introduction of better transportation facilities. Improved roads were notably lacking in Germany and, though some progress was made after 1815, it was not until the middle of the century that construction was rapidly pushed. The traffic on the rivers and few canals, once freed from the taxes, was further extended by the introduction of steamboats. Most important of all, however, was the development of the railroad system. Starting in 1835 the railroad mileage had increased to some 3,000 miles by 1850, a figure considerably greater than that for France. Moreover, the lines were better located than those of France to further the development of long-distance traffic and in this essentially agricultural and politically decentralized country the effects were widespread and important.

Although these developments were most influential in stimulating the internal trade of the country, they also furthered the growth of foreign trade and, somewhat, that of the merchant marine, though the latter remained comparatively small. It is significant of this stage of Germany's development that the chief exports were agricultural products such as wheat, vegetable oils and seeds, wines, and wool; and the exports of manufactured goods were relatively small. In fact it has been said that at the middle of the century Germany was nearly 100 years behind England in economic development. The great changes that revolutionized the economic organization of the more advanced nations during the nineteenth century were only just beginning to be felt. Though some progress had been made, it remained for the latter part of the century, chiefly the period after the attainment of political unity under the Empire, to achieve the economic modernization of the country.

The Economic Development of Other Lands. The economic developments in the rest of Europe during this period are not particularly significant for our purposes. Belgium, after securing political independence in 1830, developed mining and manufacturing fairly rapidly with the aid

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of the new methods. Holland remained an important trading country; relatively she lost ground in this respect, and her once dominant merchant marine, chiefly dependent upon trade with foreign countries and crowded out by their restrictions, was reduced to small proportions. The Scandinavian countries on the other hand were increasingly successful in the extractive industries, shipbuilding, and the carrying trade. Spain and Portugal, once so important, were now backward and insignificant. Italy was still a group of wrangling states no longer of much commercial importance. Austria-Hungary was more backward than Germany. Vast Russia, still lacking railroads, was an essentially medieval country practically untouched by Western development, though still sending out some agricultural and forest products from her Baltic ports and, during this period following the opening of the Dardanelles, beginning to ship wheat from the Black Sea region.

Throughout most of Europe much social unrest was in evidence during this period. In 1848 this broke out in a series of revolutionary uprisings in many countries. These reflected the growing power and rising aspirations of the middle and lower classes and, whereas their immediate objective was generally greater political freedom, they almost invariably resulted in changes that brought greater economic freedom as well.

In the case of the other continents such developments as occurred during this period are significant for our purposes chiefly as they reacted upon the world's commerce. With the abolition of the slave trade the commerce of Africa became less important; for, aside from some increase in the exports of agricultural products from the Mediterranean coast and Cape Colony, there is practically nothing to record in the development of that continent. As the settlement of Australia and later New Zealand slowly advanced, wool and later gold began to be exported. In Asia the trade with India was stimulated, as previously noted, and the rich possessions of the Dutch East Indies continued to send valuable tropical products to Europe. After about 1840, as a result of a series of wars, China opened new ports to foreign trade, thus considerably increasing the commerce with that country. Japan, practically closed to foreign trade for two centuries, opened her ports after a series of treaties between 1854 and 1858. In Central and South America the colonies of Spain and Portugal had established their independence by 1822 and, once freed from the restrictive commercial policies of those countries, their commerce slowly but steadily grew, raw products being exported and manufactures imported. Yet the unstable governments, the lack of capital and railroads, and the generally backward state of the population made progress in their economic development extremely slow.

In the West Indies, the development of which had been such an important factor in the economic life of the colonies, this period brought a

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marked change. The world found other sources of supply for the great staples, such as sugar, cotton, coffee, and indigo, the output of which had made these islands so valuable in the eighteenth century. The island of Haiti, the French portion of which had been the greatest sugar producer of the group, lapsed into semibarbarism on attaining independence. The British and French islands, already suffering from depletion of soil fertility, were hard hit, by the abolition, first, of the slave trade and then of slavery and, finally, by the rise of the beet-sugar industry in Europe and the growing competition from the cane sugar of the Far East. From all these changes they suffered severely. On the other hand, Cuba, and to a less extent Puerto Rico, which under the strict Spanish control of the colonial period had scarcely begun their development before the last third of the eighteenth century, grew rapidly under the more liberal policy subsequently adopted and Cuba soon became the great sugar producer of the group. Although its growth more than offset the decline elsewhere, the group as a whole quite lost its eighteenth-century importance in world trade.

In Canada, on the other hand, the rate of growth, as measured by the increase in the white population, was more rapid than in the United States, though in absolute amount far less striking. Her population, originally chiefly of French origin, was first largely augmented by the influx of the Loyalists after the Revolution, subsequently by a large immigration from the United Kingdom, 1826-1834, and again after the Irish famine. Many of these immigrants subsequently moved on into the United States. By 1861 the population had risen to about 3,200,000. At this time the better farming land in the region east of Lake Huron had been occupied but, aside from the small Red River settlement and scattered outposts in British Columbia, the West remained unsettled. In the effort to take advantage of its great inland waterway and provide the transport facilities so essential for growth, a series of canals and river improvements had been constructed opening up the route through the Great Lakes and down the St. Lawrence. In the secondary objective of diverting traffic from the United States down the river to Quebec and away from the Erie Canal, this had met with little success.

Of the two great staples of the colonial period, fish and furs, the former remained important but the latter in time lost its significance. In its place arose lumbering and its related industries, greatly stimulated by preferential treatment of the products in the British market till this advantage was lost in the forties. As population increased, agriculture expanded, especially the growing of wheat, which enjoyed a similar stimulus till it also was lost with the repeal of the corn laws. The ending of the preferential treatment of these two staples, which had been the chief strictly economic gain derived from the imperial connection, led to a demand for

annexation to the United States among certain groups in Canada and was a factor in the movement resulting in the reciprocity treaty of 1854 which greatly stimulated trade between the two countries. The union of Upper and Lower Canada, effected in 1841, was a much needed move in the direction of greater political and economic unity. However, the economic life of the Maritime Provinces had rather meager connections with the rest of the country and that of the Far West had almost none.

In general, the result of this development in the more backward continents was to increase the supply of foodstuffs and raw materials for manufactures needed by the nations of western Europe and, to a less extent, by the United States and also to provide an expanding market for the manufactured products of those countries. At the same time, it provided new outlets and opportunities for the growing population and accumulating capital of Europe. In short it meant a step in advance toward a more nearly world-wide specialization and division of labor, resulting in a more complete and effective utilization of the economic resources of the world and enabling all countries participating to secure a living more economically.

Outstanding Characteristics of the Period 1816-1860 in the Economic Development of the United States. With the ending of the War of 1812 the United States entered upon a new epoch in the history of its economic development. The preceding period from the outbreak of the Revolution, as has previously been explained, had been seriously disturbed by the abnormal conditions arising out of the wars which frequently dominated the immediate course of events. The return of peace, which endured almost without interruption for a generation and a half, allowed the country to devote its attention and energies to its own affairs and development and European political events ceased to be as important a factor as they had been theretofore. It might be said that the country, having attained independence, being so situated as to escape the minor imbroglios that beset European countries, and adopting a policy of isolation, turned its back upon the Old World, faced to the West, and became absorbed in the task of opening up and developing the vast domain endlessly spread out before its vision and awaiting only the quickening touch of its hand to become an Eldorado.

In fact, this West and the problems connected with its settlement and development became the dominant factor in the economic, political, and social life of the nation during this period. It was the desire to exploit the resources of the region that led to territorial acquisitions which extended the borders of the country to the Pacific and rounded out the concept of its "manifest destiny." The presence within its political borders of these rich untouched resources was the most important single factor tending to differentiate its economic development from that of

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the countries of western Europe. Largely because of the opportunities thus offered, European emigrants and capital were attracted to this country in steadily growing volume. This development then may properly be considered as one phase of the expansion of the people, capital, and civilization of Europe which, beginning with the sixteenth century, became so marked a feature of the world's development during the nineteenth century.

Whereas the opening up of the West was the dominant factor in the nation's history during this period, other important developments were also taking place. The improvement in the means of transportation together with other changes helped to complete the breakdown of the local or sectional economy; specialization and division of labor were extended; domestic commerce was expanded; an increasing number of ties bound the different sections of the country together economically. All of these furthered the development of a national economy.

Economic progress was stimulated also by the introduction of new inventions, the increased use of machinery and steam power, and the slow rise of the factory system. All these brought important changes in the organization of industry and created new problems of social and economic adjustment to meet the altered conditions. At the same time the progress in manufacturing, following the rapid growth during the latter years of the preceding period, tended to make the nation, relatively speaking, economically independent, and thus rounded out the movement that had started with the achievement of political independence at an earlier date.

Finally, the government, strengthened by its recently acquired powers under the new Constitution and building upon the foundations laid in the preceding period, was becoming a more important factor in the economic progress of the country. In some cases it extended aid to private enterprise or itself engaged in economic activities; in other cases it served as a regulatory or controlling force to direct economic activities along lines deemed most desirable socially.

CHAPTER XVII

POPULATION GROWTH AND THE PUBLIC DOMAIN

The Growth of Population. The growth of the population of the country continued during this period at about the same high rate as appears to have prevailed during the colonial period. The average rate of increase in each decade from 1790 to 1860 was about 35 per cent, a trifle lower in the decades between 1810 and 1840, a little above that during the other decades. In absolute figures this meant an increase in the total population from a little less than 4,000,000 in 1790 to some 9,600,000 in 1820 and over 31,400,000 in 1860. This rapid rate of growth, many times greater than that of the nations in western Europe (see the charts on pages 509 and 551), gave the United States by 1860 a total population greater than that of the United Kingdom and not far below that of France or Germany. This fact alone was of the greatest importance in altering the relative economic and political strength of the nation. The United States could then be reckoned among the great powers of the world, whereas in 1790 the nations of Europe could look down upon it as a young upstart, vigorous, and perhaps of great promise, but still weak, undeveloped, and untried.

Of the total population in 1860 nearly 4,500,000 were Negroes and almost 4,000,000 of this number were slaves. But the Negro element in the population increased more slowly than the white. After the abolition of the slave trade in 1808 the decennial rate of increase of this group was always below that of the white population; by the decade 1850-1860 it had fallen to 22 per cent. Though the birth rate was probably high the death rate was also very high. This group benefited less from the advances in medical science, sanitation, and hygiene which, by prolonging the average length of life, were factors in the increase of the whites. The greater increase among the whites was in part owing to the fact that the natural increase still remained fairly high; it was also in part a product of the steadily mounting number of immigrants, for in 1860 there were over 4,000,000 people of foreign birth, practically all whites, in the total population.

Immigration. After the return of peace in 1815 immigration to this country quickly revived. From 1821 government statistics of the movement are available and are shown in the charts on pages 553 and 555. As these indicate, there was little increase in the decade of the twenties

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when the annual average was about 14,000. From 1830 to 1837 there was a considerable advance; thereafter until 1846 the inflow was almost stationary. Finally there is a sudden spurt reaching a high point in 1854 when the number of immigrants was over 427,000, after which it dropped to less than half that figure.

Although these fluctuations were closely connected with periods of general prosperity or depression, the sudden advance after 1845 was a product (1) of the Irish famine and (2) of the European revolutionary movements of 1848, particularly in Germany, where an agricultural depression was also a factor, which led many to seek greater freedom in a republic. Except for a portion of this latter group, which perhaps made up the most intellectual and able group that came to this country during the nineteenth century, the desire to improve their material condition was the dominant motive that governed the immigrants; it was even more dominant than in the previous century. Finally, it is to be noted that the countries from which most of these immigrants came were the same that furnished the stock, other than slaves, that had populated the colonies. The percentage from Great Britain proper was smaller and that from Germany and Ireland larger. Previous to 1850, when the lure of California gold aroused all central and western Europe and even attracted the Chinese, the number of immigrants from outside Germany or the British Isles was insignificant. It should be mentioned, however, that the colonial immigrants coming from Ireland had been largely constituted of the Scotch-Irish stock of Presbyterian faith from northern Ireland, but that in this period, especially after the famine, they were mainly of the Celtic stock and of the Roman Catholic faith, a fact partially responsible for arousing some opposition.

In general the country welcomed the immigrant with open arms. In a land where common labor was scarce and skilled artisans even scarcer, this addition to the supply was eagerly received by all employers. In fact, many of the railroads sent agents to Europe to secure immigrants to work for them. Even the laboring class showed little signs of widespread opposition, and the country as a whole regarded the immigrant as an addition to the resources available for furthering that economic development in which it was so deeply absorbed.

Still the period did not pass without some outspoken opposition. It was found that a much larger percentage of foreign-born than natives became public charges and also that many paupers were sent over from Europe to relieve those countries of the cost of supporting them. Furthermore, the country was predominantly Protestant and, when a marked increase occurred in the number of immigrants of Roman Catholic belief, some opposition based on religious grounds developed. In 1834 anti-Catholic riots broke out in New York and were followed by the organiza-

tion of the Native American group which gave political expression to this opposition and in time slowly spread to several other states. In the fifties the Know-Nothing Party developed even greater strength. This opposition led most of the states where the immigrants landed to pass laws levying a nominal tax or requiring a bond that the immigrant would not become a public charge within a few years; but the constitutional powers of the states were too limited to secure appreciable results.

As far as Federal legislation was concerned, the only action was the passage of a series of laws, beginning in 1819 and considerably augmented after 1846, designed to improve the living conditions on the vessels on which the immigrants were brought to this country. The trip was a slow one taking five or six weeks and the crowded, unsanitary conditions were such that thousands died on the passage. Thus, the national government tended to aid immigration.

The Expansion of the Public Domain. The rapid growth of population naturally resulted in the people quickly spreading out over the unsettled public domain. As the most desirable land was taken up and emigrants ventured beyond the political boundaries of the country, this movement became an important factor in the political events leading to the acquisition of still more territory. A little more than a generation after the area of the country had been doubled by the acquisition of Louisiana Territory, at which time statesmen doubted whether that land would ever be settled, further acquisitions were being demanded.

In 1819 Florida was obtained from Spain for \$5 million, thus rounding out our political control in that section of the continent. The influx of Americans into Texas, where the population rose to around 30,000 by 1835, hastened that state's declaration of independence from Mexico in 1836 and its annexation in 1845. This added to the United States an area almost as large as Germany and France combined, but the title to most of the public land in it was retained by the state and only about one-quarter became a part of the public domain. The war with Mexico leading to the acquisition of California added an area half as large again as that of Texas. The Gadsden purchase in 1853 was primarily for the purpose of securing a physiographically more favorable railroad route to the coast. Meanwhile, the settlement in 1846 of the long-standing dispute between Great Britain and the United States over the Oregon territory definitely gave to this country the portion south of the 49th parallel of north latitude. The sum of these various acquisitions gave the United States complete control from the Atlantic to the Pacific and added an area considerably greater than the total area of the country in 1789. The resulting total area of over 3 million square miles made the country roughly fifteen times as large as France or the German Empire and twenty-five times larger than the United Kingdom. But the character of most of the land so

obtained was very different from that already possessed. Although it included rich timber and mineral resources and vast grazing areas, by far the greater portion, particularly that between the 100th meridian and the Sierras, was too arid for ordinary farming.

The Acquisition of Land from the Indians. It was the general policy of the government, following the usual colonial practice, to recognize the right of the Indians to the lands that they occupied. It was therefore necessary to negotiate with them to secure their title before their lands could be opened up and sold to the white settlers. Frequently the eager whites, impatient of the government's delays, would not wait for the removal of the Indians; the hunters and trappers or those anxious to secure particularly desirable lands could not be held back. This invasion of the Indian's hunting grounds led to innumerable Indian outbreaks which furnished a frequent excuse to bring pressure to bear to compel the aborigines to surrender their titles and move farther west. It must be admitted that the Indians were given little choice in the matter; the insatiable demands of the westward marching whites were irresistible.

The policy which the government adopted at this time was to negotiate for the removal of the Indians to the region beyond the Missouri River where reservations were created upon land which it was then assumed the whites would not soon want. There were also a few small reservations established in the older states such as New York, Maine, Florida, Wisconsin, and Michigan, where such of the old tribes as still survived were permitted to rest in peace. By 1830 practically all of the land east of Kansas and Nebraska and south of Iowa and Wisconsin had been ceded by the Indians except for two considerable sections in the South held by the hostile Creeks, Cherokees, Choctaws, and Chickasaws. Before 1840 these tracts were also obtained and by that time practically all of the tribes had been removed to Indian Territory or other lands west of the Missouri, and to the east the whites were left in undisturbed control.

The Policy in Disposing of the Public Domain. Previous to the War of 1812 most people seeking new land for settlement had located upon state lands that were not a part of the public domain. It has been estimated that at least one-half of the settlers west of the Appalachians in 1820 had taken up lands in regions never under the public land system and probably not over one-quarter of those joining in the westward movement had been affected by the public land regulations. But, as the supply of desirable land belonging to the states was approaching exhaustion and the stream of westward emigration was rapidly increasing in volume, the regulations governing the disposition of the public domain became more important and much political controversy centered around the various changes in the land laws that were demanded.

The attitude of different sections of the country toward these various changes well reflected the conflicting economic interests of the groups. An understanding of their attitude is complicated by the fact that in the political controversies of the period the question of the public land laws became closely connected with several other economic and political issues such as the tariff, internal improvements, and slavery so that the actual legislation enacted was generally the result of a political compromise reflecting the varying economic interests of different sections on several issues.

In the East the manufacturers were generally opposed to cheap Western land for fear it would drain off their supply of labor. On the other hand, if receipts from the sale of public lands were large it would lessen the need for customs duties, which were the chief source of national revenue, and might lead to a reduction of the duties, which the manufacturers did not want. Hence they were willing to use receipts from the sale of public lands for internal improvements or give them to the states, the more so since the West favored this and might thereby be induced to vote for other laws that the East desired. Many Eastern farmers, taking a similar stand, feared that the competition of Western products would decrease the prices of their crops and the value of their land. The laboring classes in the East took the opposite stand and, especially after about 1820, began to demand free land in the belief that if they possessed the alternative of going west and taking up land it would help to raise the level of their wages.

In the South, where from 1820 on the opposition to the protective tariff duties was strong, it was hoped that large receipts from the sale of public lands would lessen the need for customs duties. For the same reason they opposed spending such receipts for internal improvements, the more so as that was also contrary to the general principle of strict construction of the constitutional power of the Federal government which prevailed in that section. After about 1840, the South began to feel that free land was inimical to slavery as nonslaveholding farmers were likely to settle in the West more rapidly than those interested in slavery. This fear was increased by the Kansas-Nebraska Act of 1854 and the doctrine of squatter sovereignty which provided that the settlers of each territory were to decide by majority vote whether it should come into the Union as a free or a slave state.

Although the West was chiefly interested in making access to the public lands as easy as possible, some speculative groups feared this might depreciate the value of their holdings. This section also wanted aid from the government for internal improvements and so favored using the receipts from land sales for this purpose or gifts of land to the states. As time passed and one state after another was admitted to the Union,

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the political influence of the West steadily increased. Hence, throughout this period we see the East and the South bargaining to secure the political support of the West in favor of their various interests, each offering in its turn concessions in the form of free lands, internal improvements, or some other measure that the West desired. Clay's National System reflected such an effort to unite the East and the West. Although the policy involved in the resulting legislation was confused and vacillating, the general trend was to make the public domain more and more easily obtainable by the Western settler.

The Public Land Laws. The first important act of this period was passed in 1820 and provided for a reduction in the minimum price from

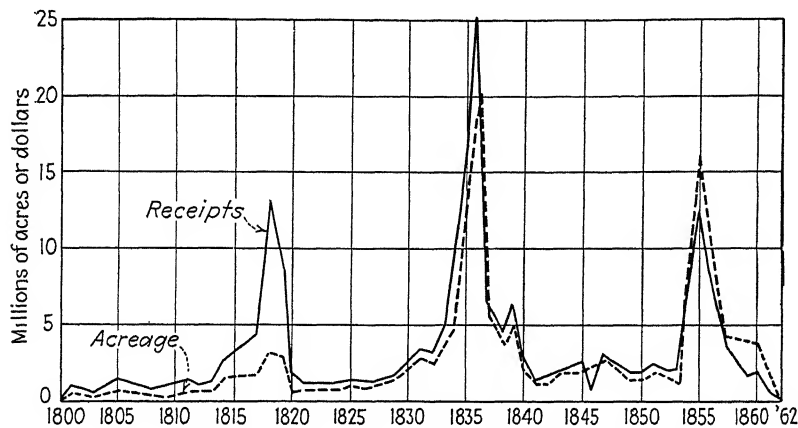


FIG. 12.—Sales of public lands, acreage and receipts, 1800–1862.

\$2 to \$1.25 an acre, a decrease in the minimum size of the tract that could be purchased to 80 acres, and cash payment instead of sales on credit. The abolition of sales on credit was designed to check speculation. Under the credit system many had bought to the limit of their cash resources to make the first payment, hoping to get enough more from their crops or the resale of a portion of their purchase to cover the later payments as they came due. In the drop in prices and land values following the panic of 1818, thousands of such purchasers were caught and the government faced constant petitions for relief and endless difficulties in trying to collect its dues. The reductions in the size of the tracts and in the minimum price reflected the wishes of the West, but were facilitated by the easier fiscal condition of the Treasury. This act is sometimes spoken of as marking a distinct change in the public land policy, the desire for revenue giving way before the purpose of hastening the settlement and development of the West. Although the act was significant of this change in emphasis, it was only one of a long series reflecting this tendency, which began when it was found that the hoped-for revenue from this source was

disappointing. The growth of receipts from customs duties lessened the need for depending upon it and the West clamored for cheaper land.

Another demand of the Western settlers was met by the series of laws known as the "preemption acts," primarily designed to protect the squatters. Under the law a legal title to land could not be obtained until the tract had been surveyed and announced for sale. But the process of surveying the land was a slow one and the inrush of settlers often carried them beyond the areas surveyed and offered for sale, especially if they learned of particularly desirable tracts. Upon settling there they became squatters. Later, when the tracts were offered for sale at public auction, the squatters, especially if they had improved the land, were obliged to bid a higher price to secure their title against other bidders; in short they had to pay just so much more because of the money and labor they had put into developing the land.

Besides the squatters there were others who, for one reason or another, found their title defective and required legislation to protect them. The first of the series of preemption acts passed were primarily to meet the needs of this type of cases. The growing number of squatters led to the passage of a general preemption act in 1830 for one year's duration; this was several times renewed until 1841, when the permanent act was passed. This provided that in designated states and territories the squatter who had built a dwelling upon and improved a tract, should have the right to buy the title at the minimum price of \$1.25 an acre before it was offered at the public auction sale. The protection thus afforded was obviously a stimulus to the practice of scattering out over and squatting upon the best tracts of unopened land, but it helped somewhat to check speculation.

The Graduation Act passed in 1854, though not of great economic importance, played a prominent part in the political field for nearly 30 years. It provided that land that had been offered for sale for 10 years and still remained unsold should be slowly reduced in minimum price to not less than $12\frac{1}{2}$ cents an acre and sold in lots of not more than 320 acres. This act, chiefly sought by the older Western states, made it possible for the farmers to secure the less valuable tracts adjoining their farms at a reasonable price and helped the government in disposing of odd, scattered tracts. There were also a few acts passed relating to the disposition of mineral lands in certain localities. These were also offered at low prices, but much the greater portion of the valuable mineral resources sold was disposed of as ordinary agricultural land; in fact the existence of many mineral deposits was unknown at the time.

The crowning success of the West was attained when free gifts of land were provided for under the Homestead Act of 1862. A demand for free land had started among the laboring class in the twenties and was per-

sistently urged for many years by an agrarian reformer named George Evans. Beginning about 1845 Horace Greeley took up the cause in the New York *Tribune* and from then on it became an important political issue. Various bills introduced into Congress almost succeeded in being enacted, but it was not until the opposition of the slaveholding South, strongly entrenched in the Senate, was removed by secession that the measure became a law. Under this law citizens or intended citizens could obtain on payment of nominal fees a tract of 160 acres after they had resided upon and improved it for a period of five years. A commutation clause made it possible to exercise preemption rights and obtain title after six months' residence on payment of \$1.25 an acre. This provided some protection to the settler who for unforeseen circumstances was unable to meet the requirement of five years' residence; but it was chiefly used by speculators who had little interest in developing the land but hoped for a quick resale. This act reflected not only the desire of the West for cheap land but the desire of the country to further the development of its resources and to provide greater equality of opportunity such as would promote economic democracy.

The Public Land Grants. Besides these provisions for disposing of the public land to individual settlers there were numerous efforts made to secure grants of this domain to promote various public purposes. The temptation to use this resource rather than levy taxes as a means for securing financial aid was hard to resist. The method seemed to involve no immediate public burden, whatever the future effects. This agitation was particularly strong in the Western states which were still poor and yet wanted money to further internal improvements and various other undertakings. As a result of the heavy indebtedness they had incurred and the fact that the enterprises undertaken frequently failed to show a profit, the situation of these states became very critical after the panic of 1837; their credit was seriously impaired and many defaulted in the interest payments on their bonds. This only increased their efforts to secure gifts of public lands or of the receipts of the government from the sale of such lands; in this they were joined by the financial interests in the East who held the state bonds. Others in the East interested in the protective tariff were inclined to favor such action since by decreasing the government's revenue it would increase the need for customs duties.

This situation explains the efforts, particularly prominent from about 1830 to 1842 and ardently championed by Henry Clay, to get Congress to give the public lands to the states or to distribute the proceeds from their sale among the states. Though nearly succeeding on several occasions, it was not until 1841 that a law was passed which gave to each public land state, besides the usual 5 per cent grant of the net proceeds from the sale of public lands within its borders, an additional 10 per cent;

it provided also that the remainder of the receipts was to be distributed among the different states and territories in proportion to their Federal representative population. As these grants were conditioned on the customs duties not being increased above the rates provided by the Tariff of 1833, and such an increase was made in 1842, the act was in force only a year. Efforts to continue it in spite of higher duties failed in the face of President Tyler's opposition. Meanwhile, however, the states had succeeded in securing aid from the government in another way.

In the middle thirties a craze for speculation in Western lands, which swept the country and culminated in the panic of 1837, had raised sales to a total of over 20 million acres in 1836, by far the highest point in history. The receipts from these sales, combined with heavy customs receipts and the extinction of the national debt, resulted in a large surplus in the Treasury. Taking advantage of this situation, Congress in 1836 passed an act providing for the distribution of some \$37 million among the states in four annual installments. The sudden decline in government receipts following the panic resulted in a deficit, and payment of the final installment was stopped after over \$28 million had been paid out. Whereas, technically, this distribution was made in the form of a loan to meet constitutional objections, it was generally understood to be a gift; and the states, which used it for a great variety of purposes, have never repaid it.

Though the successful efforts to obtain some form of general distribution came to an end with these two enactments, there were numerous other grants for more specific purposes. Among them were various forms of internal improvements so urgently needed as the population surged into the West. In addition to undertaking the construction of the National Turnpike, to be described later, Congress in the twenties made a few small grants to the states to aid in the construction of wagon roads, especially such as were of military importance. A number of grants of land to the states for canal construction were made beginning in 1827 and ending in 1866. These were all made to states of the old Northwest and the total so disposed of was about 4,600,000 acres. Finally, there were the grants for railroad construction, the first period of these grants coming in the decade of the fifties. At this time most of these grants were made to states bordering on the Mississippi River. The general plan, which was a development of that employed earlier for canal grants, was to give a strip of land 100 feet wide for the roadway and, in addition, alternate sections of land in two strips of varying width on either side of the roadway. Six miles was a common width of these strips in the grants of this period thus making a total grant of six square miles of land per mile of railroad. The alternate sections remaining to the government were to be offered for sale at double the minimum price of \$1.25 an acre.

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Among the other specific purposes for which grants of the public land were made, those for education, drainage of swamplands, and for military services were the most important. The early policy of reserving one section in each township for school purposes when public land states were admitted to the Union was strengthened when in 1848 the practice of setting aside two sections was inaugurated. In 1850 Congress granted to each of the then existing states (to which Oregon and Minnesota were later added while Louisiana had obtained a special grant the previous year), the overflow and swamplands of the public domain within its borders. By this method fifteen states have received about 63 million acres. Although it was provided that the proceeds were to be used "exclusively, as far as necessary" for the reclamation of these lands, they were sometimes diverted to other purposes. These grants were made in the expectation that they would provide an incentive for the states to drain such lands and because it was felt to be no more than just that where states expended considerable amounts in drainage or levee work the increased value of the adjoining public land should revert to them rather than to the Federal government. In fact, however, outside of some levee work in the Mississippi Valley, the states did little to reclaim these lands until near the close of the century. Besides these grants to the states there were numerous grants to private individuals who had performed some public service, the most important being those to men who had fought in the various wars in which the country had been engaged since the Revolution.

The Wisdom of the Public Land Policy. From the foregoing account it will be seen that the wishes of the West became increasingly dominant in shaping the public land policy as time went on. The lands were made easier and easier to obtain until finally they were given away, and more and more generous grants were provided to aid various undertakings of public importance in the newer states. How far this policy was a wise one from the point of view of the long-run general welfare of the nation is not easily determined, for it undoubtedly entailed both advantages and disadvantages. Among the advantages it may be said that it hastened the process of settling the country and developing its resources; it facilitated the financing of various undertakings of public importance; it helped to improve the condition of the poorer classes and to attract immigrants; it served to promote a spirit of individualism and democracy.

Among the disadvantages, on the other hand, it may be claimed that it tended to promote an extravagant and wasteful use of the natural resources; it scattered the population, making government more difficult and decreasing the effect of those civilizing institutions that depend upon a fair density of population; by trying to hasten development it was an important factor in accentuating the business cycles which periodically

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disturbed the country; and, though not so intended, it often promoted speculation and made possible private gain without any resulting public benefit, because the laws were drawn up and administered in too lax a manner effectively to check it. This last evil could easily have been lessened without altering the general policy. As far as the other disadvantages are concerned, we may perhaps conclude that on the whole they were outweighed by the gains, though greater discrimination in carrying out the general policy would have been better.

CHAPTER XVIII

THE OPENING OF THE WEST

The Westward Movement of Population. Facilitated by the more liberal land policy together with the introduction of better means of transportation and urged on by the rapid growth of population, the westward movement was resumed after the close of the War of 1812 on a scale far greater than ever. "Old America seems to be breaking up and moving westward," wrote a foreign observer in 1817.

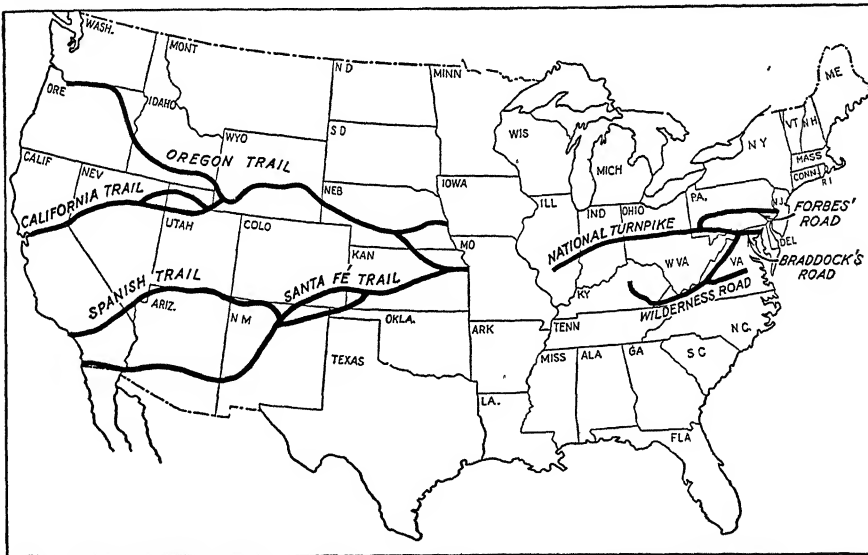
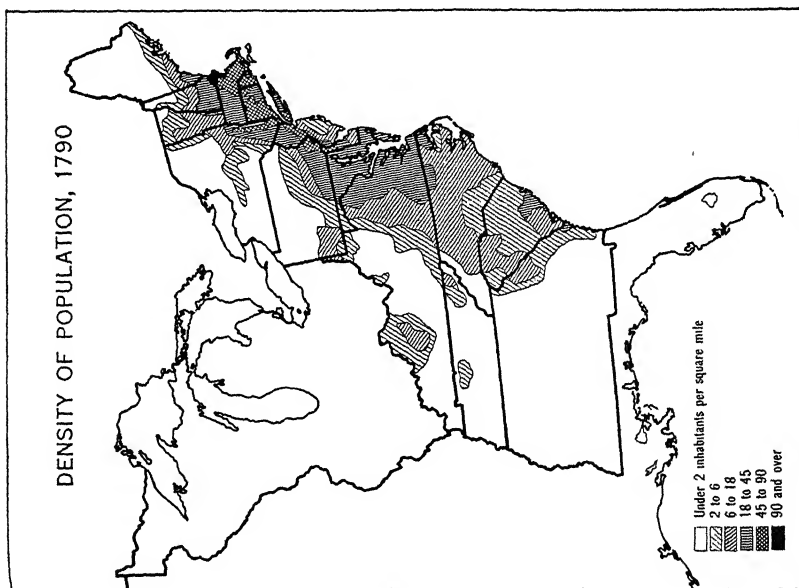
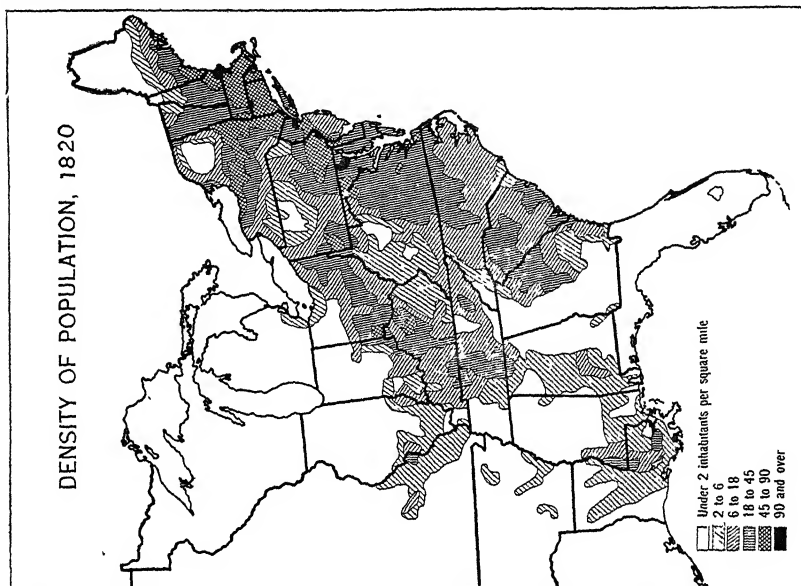


FIG. 13.—Chief roads and trails to the West. (Base map, copyright, 1939, by the University of Chicago.)

Up to about 1830 the immediate objective of most settlers was the upper waters of the Ohio between Pittsburgh and Wheeling. The completion of the National Turnpike to the latter place in 1818 induced many to follow this route. Arriving at the Ohio such needed supplies as had not been brought along were purchased and the emigrant floated down the river on a raft till he reached the point nearest his chosen destination. Thus in the early period the most rapid growth of settlement took place along the valley of the Ohio River gradually extending back from the river and down the stream as the flow of emigrants increased. In fact, as early

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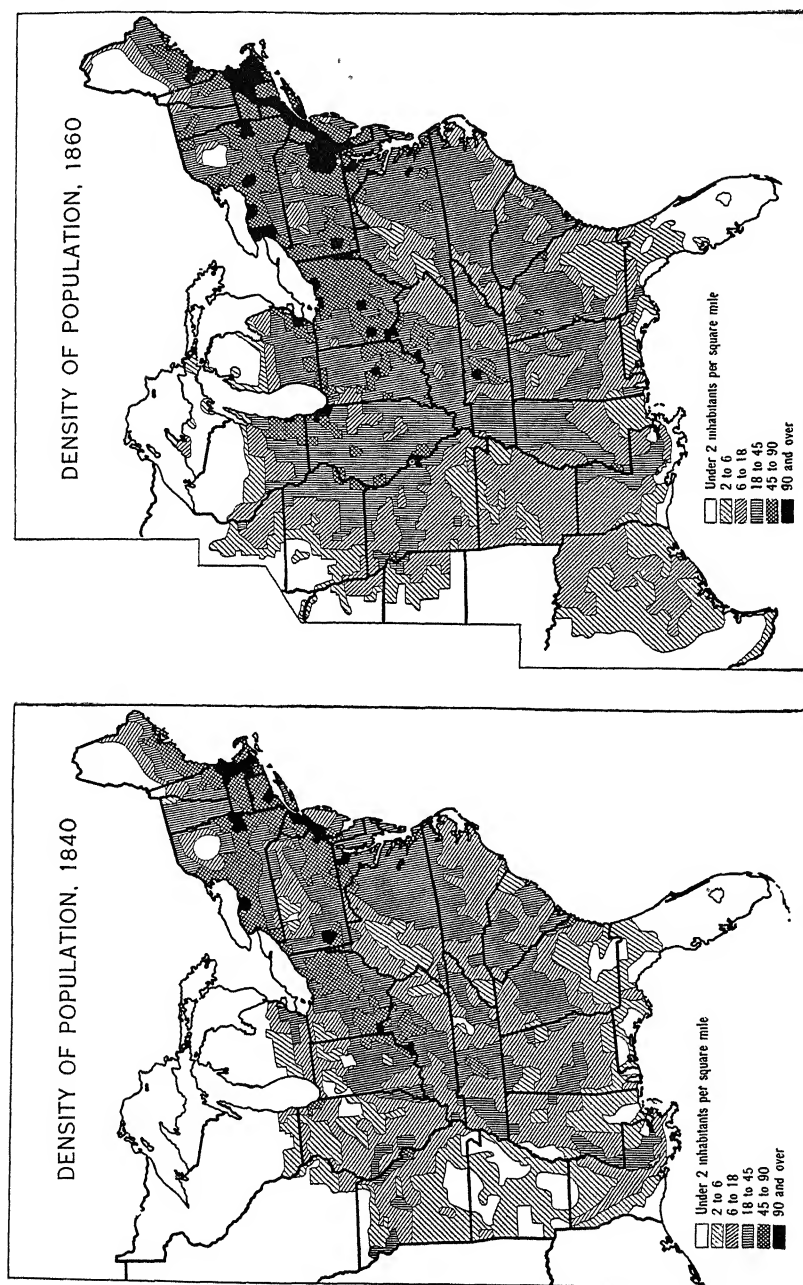


FIG. 14.—Settled areas and density of population, 1790–1860. (Reproduced from C. O. Paullin, "Atlas of the Historical Geography of the United States," New York, 1932, by permission of the American Geographical Society of New York.)

as 1820, a thin line of settlement extended up the Missouri River halfway across the state of Missouri, and another line was spreading up the Mississippi from its junction with the Ohio. Previous to 1825, when the Erie Canal was opened, few settlers ventured into the sections bordering on the Great Lakes west of Cleveland; consequently, that region was slow in starting to grow.

In the South the presence of hostile Indians prevented extension into western Georgia and parts of Alabama and Mississippi until after 1830. Before that time the spread of settlers up the river valleys from Mobile had reached the earlier settlements in central Tennessee. Meanwhile population was also moving northward from the old French settlements in Louisiana up the Mississippi, the Red, and the Arkansas rivers. It is thus seen that transportation facilities supplied by the water routes chiefly determined the directions in which settlements grew at this period. In fact, this continued to be the case until the rapid extension of railroads in the West in the decade of the fifties and the beginning of their construction ahead of settlement, after 1860.

After 1825 the Erie Canal provided the easiest means of access to the West for most emigrants from the North Atlantic states; thereupon a large number began to settle in the regions bordering upon the Great Lakes, the New England element being particularly prominent in this movement. It was not until after about 1830 that settlers began to venture far from the wooded river lands out upon the open prairies in Illinois and to the westward; but once pioneers had demonstrated the richness of this soil others were quick to follow. By 1840 all of the old Northwest except central and northern Wisconsin and Michigan could be regarded as settled, and subsequent comers were pushing across the Mississippi. Although the advent of the railroads in the West in the fifties helped to fill in the sections distant from water transportation, the vanguard of settlers kept well ahead of them until after 1860. At that date the railroad construction reached little beyond the Mississippi, whereas the frontier line of settlement (measured by regions having from two to six inhabitants per square mile) extended from central Wisconsin up the Mississippi to a point somewhat north of Minneapolis and thence southward to north-western Iowa where it met a line of settlements extending up the Missouri as far as Dakota and spreading westward into eastern Kansas and Nebraska.

Meanwhile the expansion in the South was proceeding at a rapid pace. In the thirties the removal of the remaining Indians combined with high prices for cotton resulted in the occupation of nearly all of the land east of the Mississippi by 1840, together with the greater portion of Missouri and Louisiana and much of Arkansas. Some settlers were attracted beyond the bounds of the Union into Texas. After the annexation of the latter

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it furnished the chief opportunity for southern expansion up to 1860, though there was a steady filling up of the states adjoining the Mississippi. By this date the Southern frontier line, held back by the Indian reservations west of Arkansas, extended westward in Texas almost to the 99th meridian.

The Westward Emigrant. Previous to about 1830, just as in the period before 1815, the greater portion of those emigrating to the West came from the South, generally from the small farming class of the uplands, mostly nonslaveholding, typically Scotch-Irish, Germans, or Quakers. It was this stock that settled Kentucky and Tennessee, whence came most of the earlier settlers of Missouri. It was this same group that contributed the greater portion of those who located in southern Ohio or Illinois and made up the Hoosier stock of Indiana. This same region also supplied most of those who moved to the Southwest at this period, though in this movement there was also found a considerable group coming from the tidewater sections along the South Atlantic coast. The migration to the West from the North Atlantic states was much less important before about 1830. The distance and difficulties of transportation checked the movement from New England and there still remained areas only sparsely settled in northern New England and western New York. In the case of the middle states such migration as took place was chiefly to western Pennsylvania and Ohio.

After the opening of the Erie Canal in 1825 an easy route of travel to the West was available for the emigrant from the North Atlantic states and the movement from this section became far more important than previously. The results were reflected in the rapid growth of population in the sections bordering on the Great Lakes, theretofore almost neglected west of Ohio. Northern Ohio, Indiana, and Illinois and southern Michigan and Wisconsin were rapidly filled in with settlers, chiefly of New England stock. In the forties the newcomers seeking unoccupied lands were being forced to travel across the Mississippi to Iowa; before the following decade had passed they were moving beyond the Missouri into eastern Kansas and Nebraska. In this migration to the Northwest many from the middle states joined, though those from Pennsylvania were more apt to go to Pittsburgh or Wheeling and thence proceed down the Ohio or over the National Turnpike.

Though, generally, these emigrants moved as individual families, there were numerous instances where, following old New England precedent, groups of 50 or 100 families would join together in a common agreement and move as a unit to some new settlement in the wilderness. This migration brought into the states of the old Northwest an element that soon surpassed in numbers the earlier settlers from the South and in time became an important influence in shaping the social institutions and life

of this section. Particularly significant was the transplanting of such typically New England institutions as town government, the Congregational Church, and the public schools and academies. Frontier conditions, however, somewhat modified their form and subsequent development.

For the most part the settlers of the Southwest came from the South Atlantic states including both the upland and the tidewater regions. The rich, fertile cotton lands promised better returns than the older and partially exhausted lands in the East, and before 1830 the cotton crop of the Southwest had risen above that of the Southeast. Thus the social and economic institutions of the old South were extended westward and helped to unify the whole South. It was not long, moreover, before emigrants were pushing westward beyond the Mississippi; by 1840 nearly all of Louisiana and Missouri had been settled and most of Arkansas. Furthermore, from the twenties on, when the Austins, father and son, sought to establish settlements in Texas, Americans had been migrating to that region. By 1840 there were probably around 50,000 whites, mostly from the United States, in that state; after annexation and the occupation of the best land to the east, the population grew rapidly in the fifties. Although the greater portion came from the South, Texas had a somewhat larger admixture of people from the North than did the rest of the states which made up the cotton belt.

In the South, unlike the North, the growth of population and the spread of settlement were little affected by the influx of immigrants into the country. How far this was owing to the presence of slavery, how far to the greater opportunities for getting a living which the North with its cities, its factories, and internal improvements seemed to offer, and how far to the fact that most ships from Europe sailed to Northern ports, is not easily determined; but it is probable that the second reason was the most influential. Only an insignificant fraction of the foreign-born population of the country lived in that portion of the South to the east of the Mississippi, and it was chiefly made up of Irish and Germans. Relatively, immigrants were more numerous in Texas. There the most important attempt to establish a considerable settlement of foreigners in the South was made by the Germans, who formed plans for establishing a German state and from 1844 began to migrate thither in considerable numbers.

The most important contribution of foreign-born to the growth of the West was made by the Germans. Most of those who came over in the great influx of that nationality after 1848 went to the Northwest and settled in the river towns and the neighboring farming area from Cincinnati to St. Louis and thence northward to Wisconsin or along the lake shore from Chicago to Milwaukee. They were most numerous in Missouri and Wisconsin and their social habits and customs, less severe than the puritanical practices of the New Englanders, became an important influence in the

communities where they congregated. Besides the Germans there was a considerable Irish element that eventually drifted into the Northwest, often sent to engage in construction work on internal improvements and tending to settle in the larger towns and cities. Thus it turned out that in 1860 out of nearly 2 million foreign-born living in this country west of the Appalachians barely one-quarter was located in the South.

This contribution of the foreign-born peoples to the growth of the Northwest was a factor, though a minor one, in the more rapid growth of population in that section than in the Southwest. It is essential to note that throughout this period the states north of the Ohio and Missouri rivers were increasing in population, both absolutely and relatively, more rapidly than those south of them. Though, in 1810, the latter had more than twice the population of the former, they lost this lead before 1840 and by 1860 the population in the Northern section was more than 50 per cent greater than that in the Southern. This fact, serving both as a cause and as a result, was of vital significance in determining the relative economic development of these two sections as well as for its bearing upon the Civil War.

The Growth of the Cities. Before turning to the opening of the Far West, where cities were unknown until the sudden rise of San Francisco, it is desirable to note the growth of urban population and the larger cities. In 1790 the census showed six places that had a population of 8,000 or more, the total of whose inhabitants made up 3.3 per cent of the total for the country. By 1820 there were only 13 such places, whose population included less than 5 per cent of the total; by 1860 there were 141, which contained over 16 per cent of the country's inhabitants. This growth of city population obviously meant an important change in the economic and social environment of the people.

Various economic developments made this growth possible. During this period, as in colonial times, trade was the chief factor responsible for the growth of cities; it was in the main this activity that tended to draw people to the larger cities and it was largely to supply the economic needs of this group that others, engaged in different pursuits, were also attracted to the rising centers of population. Still it is to be noted that the increase of manufacturing was becoming a more and more important factor in the growth of cities. The rise of cities of fair size, such as Fall River, Lowell, and Lawrence, owing almost exclusively to the development of manufacturing enterprises, was a frequent occurrence. The extension of the market for products of industries, originally located in trading centers chiefly to supply local needs, resulted in the importance of manufacturing enterprises as a factor in the expansion of cities like New York, Philadelphia, and Boston, where trade and commerce were the primary factors in the city's development.

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In the growth of the older seaboard cities during this period access to the trade of a growing hinterland was the most important factor. It was partly through this means that New York took the lead as the most populous city of the country and, as the chart on this page indicates, rapidly forged far ahead of all rivals. The opening of the Erie and Champlain canals drew the trade of western Vermont and central and western New York and, after furthering the settlement of the Northwest, in time drew an even greater trade from that section. Favored by its harbor and

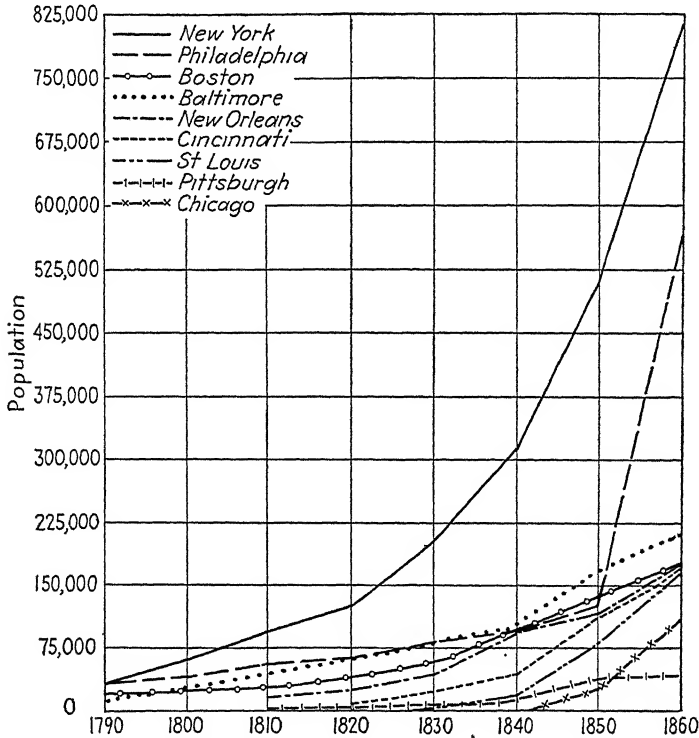


FIG. 15.—Population of the larger cities, 1790–1860.

central location, New York also became the great distributing center for imported goods. On the basis of the growth from these causes, by about 1830 it had also wrested from Philadelphia the distinction of being the leading financial center of the country.

Philadelphia grew at a much slower pace. It had a limited hinterland dependent upon it and found its earlier preeminence in trade with the Western settlements on the Ohio impaired by the rivalry of Baltimore, New York, and, after the introduction of the steamboat, by New Orleans. Still, aided by a considerable development of manufactures and, after 1850, by the addition of surrounding suburbs, it held second place in 1860

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with over 500,000 inhabitants. Baltimore had practically caught up with Philadelphia by 1820 and soon surpassed it; but as it was less active in developing manufactures and populous suburbs to be annexed, it had fallen back, by 1860, to third position among our cities with about half the population of Philadelphia.

Not far below came Boston which had enjoyed a fairly steady, though slow, growth, since it was largely dependent upon the development of New England and only beginning to share a small portion of the trade with the Northwest as the railroads made connections. In the South, Charleston fell far behind. The immediately surrounding region developed but slowly, and the commerce of the growing territory to the west was diverted to the ports on the Gulf.

In the West, the growth of the different cities was largely determined by the period when the surrounding region was settled and the trade which that region or the through trade routes developed. Throughout the period New Orleans was the largest city in the West; in 1860, with 168,000 inhabitants, it nearly equaled Boston in size. Its preeminence was due to its position at the outlet of the great river systems along the borders of which the earlier settlers in the West congregated and down whose waters so much of their products was shipped. After the introduction of the steamboat, it also became the entrepot for goods carried up the river.

In 1810 Pittsburgh, though having only about 5,000 inhabitants, was second in size among the cities of the West, its early importance being due to its location at the converging point of the routes followed by so many of the westward emigrants at this period, the growth of manufactures to supply the emigrants' needs, and its business as a distributor of goods brought over the mountains from the East. Most of these advantages were soon lost and in 1860 it had just under 50,000 inhabitants. Cincinnati was the next to rise and surpassed Pittsburgh in 1820. The early settlement of Kentucky and southern Ohio favored its growth and throughout the period it remained the great commercial center of the Ohio Valley and the second largest city in the West, almost equaling New Orleans by 1860.

Though much older, St. Louis was very slow in getting started, depending chiefly on the fur trade of the Far West. Hence it was not until 1840, after settlers had begun to pour into the regions bordering on the upper Mississippi and the Missouri, for which it was the commercial center, that it jumped forward at a bound and by 1860, with 160,000 inhabitants, practically equaled Cincinnati.

The difficulty of access to the region bordering on the Great Lakes with the consequent delay in its settlement explains the slow and late growth of the cities in that section. An early start gave Buffalo a lead which

it held until after 1850, when it had 42,000 inhabitants. Cleveland and Detroit, depending chiefly on local commerce, attained only a moderate growth and Chicago, an old trading post and garrison fort, had less than 100 people as late as 1832. The spectacular growth of that city dates from the speculative craze in Western lands that swept over the country in the middle thirties. As the region to the west was settled, the surplus crops began to be carried to Chicago for shipment eastward through the Great Lakes. In the fifties the agricultural area made tributary to the city's commerce was extended still farther by the railroads. Some manufacturing began to develop, and by 1860 the city could boast of 109,000 inhabitants, though still only fourth in size in the West and eighth in the country.

Exploration and Early Settlements in the Far West. In the Far West the first settlements made by white men took place under the regime of Spain. After the early Spanish explorers failed to discover mines of the precious metals, little interest was shown in this region; neither the climatic conditions nor the resources then known were such as to attract many. The only appreciable settlement, that at Santa Fe, maintained a desultory existence for nearly three centuries without showing much growth, though it was the center of such trade as developed in the surrounding territory. Beginning in 1769 a series of Spanish missions was established in California; but they were chiefly interested in converting and civilizing the Indians and the authorities distinctly frowned upon immigration of whites to that section.

In the Pacific Northwest the activities of the fur traders were first responsible for making the region known and for the establishment of trading posts and settlements by the whites. Apparently vessels engaged in trade with China were stopping at points in the Oregon territory to secure a supply of furs even before 1790. The keen rivalry of two great fur-trading companies, the Hudson's Bay Company and the Northwest Company of Canada, led to the establishment of numerous trading posts in this region after the opening of the nineteenth century. The first important American post, Astoria, was established in 1811 by the Pacific Fur Company headed by John Jacob Astor. This post was soon sold to its Canadian rival to prevent its capture by the English in the War of 1812. The treaty of 1818 left the political possession of the Oregon territory undetermined, though the region was open to settlement by citizens of either the United States or Great Britain. In fact, during the decade or so following, the territory was practically controlled by the two British fur companies, united in 1821. They, as well as the American fur traders, opposed the influx of white settlers, at least until the thirties, when the supply of fur-bearing animals had been so depleted that settlements seemed likely to yield greater profits.

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Quite aside from these sources of opposition to settlers there was little evidence of an inclination among the westward emigrants to locate in these distant regions, at least up to about 1840. There was still plenty of excellent land available in the Middle West and the resources of the Far West were but little known, to say nothing of the uncertainties, hardships, and dangers of the long trip across the intervening region. Exploration of the routes of travel and knowledge of the resources were essential before settlement could proceed. In this process of exploration the fur traders, in their turn, after depending on the guidance of friendly Indians, played an important part since their keen competition led them to search out every haunt of their prey. Hence, as the animals in one section were killed off, the fields of their activity were soon extended, till they became familiar with the general character and most practicable routes of travel throughout this vast region.

In addition, the exploring parties sent out by the government performed a useful service. The expedition of Lewis and Clark going up the Missouri River, over the mountains, down the Columbia to the Pacific, and then back to St. Louis in the years 1804-1806 was particularly important. In 1805 Pike, who had explored the upper Mississippi the preceding year, started westward from St. Louis to the Rockies and discovered the peak which bears his name. Yet his characterization of the West was hardly calculated to attract settlers for he wrote,

But from these immense prairies may arise one great advantage to the United States, *i.e.*, the restriction of our population to some certain limits, and thereby, a continuation of the Union. Our citizens being so prone to rambling and extending themselves on the frontiers will, through necessity, be constrained to limit their extent on the West to the borders of the Missouri and the Mississippi, while they leave the prairies, incapable of cultivation, to the wandering and uncivilized, aborigines of the country.

This point of view appears to have remained fairly typical of the attitude of most people toward the Far West until about the late forties. A notion of the great American desert, the extent of which was grossly exaggerated, became widespread and few were tempted to brave its supposed dangers.

Better knowledge of the actual conditions in the Southwest became available with the development of some trade between Santa Fe and the settlements in western Missouri. Beginning in 1822 regular, though small, caravans of wagons starting from Independence, Mo., pushed westward to Colorado and then southward to Santa Fe over what became known as the Santa Fe Trail. After 1827 some traders starting from Santa Fe traveled southward along the Rio Grande, then struck westward to the Gila River and on to San Diego. Although the caravan organization used in carrying on this trade became the model adopted by emigrants in the

later movement to Oregon and California, the Santa Fe Trail was little used except by traders.

Meanwhile progress was being made in obtaining better knowledge concerning the Northwest. In 1832 a small group led by Nathaniel Wyeth established a trading post in the valley of the Columbia and, beginning in 1834, groups of missionaries went out to settle among the Indians in the Oregon territory. Proceeding to the point where the Missouri River turns northward near the present Kansas City, they followed what was known as the Oregon Trail, destined to become the great route for emigrant travel to the Far West. Striking out across the prairies, this trail followed the North Branch of the Platte River, went over the continental divide at South Pass and then, descending the valley of the Snake River, cut across to the Columbia. The missionary expeditions proved this route practicable for wagons and women, and the further explorations of Fremont in 1842-1844, the results of which were widely disseminated, did much to dispel the ignorance concerning this country. At the same time there developed an active agitation to induce people to settle in the Oregon territory, in the belief that this would help to secure the region, still in dispute with Great Britain, to the United States. Thus, whereas there were perhaps 400 Americans in the region in 1841, the number had risen to 4,000 or 5,000 when, in 1846, the Ashburton Treaty settled the dispute.

Meanwhile a few Americans in their search for Western lands had been diverted to California, then still in the possession of Mexico. The authorities there assumed a distinctly unfriendly attitude toward the growing number of foreigners, particularly after 1843 when arrivals became more numerous. Cattle raising and a little trade were the chief attractions. There were only about 500 Americans in the state when in 1846 they took the lead in declaring the Bear Flag Republic, which was immediately followed by the occupation of the country by regular forces of the United States. Thus, once more, the expansive power of the nation and the resulting peaceful economic penetration served to extend its political boundaries.

Within the territory acquired from Mexico there was, in addition to the settlements on the coast and that at Santa Fe, one other settlement of appreciable size—practically the only one in the vast but arid region between the prairies and the Sierras. This was the little Mormon colony at Salt Lake founded in 1847. This sect, starting under the leadership of Joseph Smith in western New York about 1830, had a remarkable record of migrations. Moving to Kirtland, Ohio, in 1831 and shortly afterwards to Independence, Mo., the hostility of their neighbors led them to seek still another abode where they could remain in peace; in 1838 some 8,000 founded Nauvoo in Illinois. There Smith's revelation in favor of polygamy

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increased the general opposition. Smith himself was killed and the leadership fell to Brigham Young, under whose guidance it was decided to move once more, this time to an uninhabited region where they would be free from persecution. Thus was started a trek across the plains unparalleled in our history.

Leaving Nauvoo in the spring of 1846 some 12,000 moved to a point on the Missouri near Omaha where they spent the following winter. In the spring an advance party set out under Brigham Young, followed the Oregon Trail through South Pass, then struck off to Salt Lake, where a town was laid out and some 4,000 people arrived that year. Upheld in their endeavors by their religious zeal, guided by efficient and astute leaders, and cooperating under a highly centralized organization, they met with marked success in establishing a community in a region where the conditions were such that without these advantages the undertaking might well have failed. By constructing irrigation works they became the first Americans to make the desert bloom, and in the subsequent rush of the gold seekers across this barren region the little settlement afforded a much needed opportunity for recuperation and replenishment of supplies, an opportunity greatly to the benefit of the settlement as well.

The Gold Seekers. The preceding account of settlement in the Far West up to 1848 indicates that conditions were such as to induce but few to face the difficulties of the long trip across the plains and mountains and settle in this distant region. Some unusual incentive was necessary to attract any considerable number; this was now provided by the discovery of gold. In January, 1848, gold was discovered in the valley of the Sacramento near Sutter's fort and soon reports of the wonderful success attending the efforts of some prospectors began to spread like wildfire. One man employing 60 Indians was getting \$1 a minute; another group of 10 men working together for 10 days averaged \$1,500 each. Eventually instances of individuals who secured from \$10,000 to \$30,000 in a week or 10 days were well established.

As the news spread along the coast everybody dropped whatever they were doing and rushed to join the rapidly growing throng of gold seekers. Vessels arriving at San Francisco were at once deserted by the whole crew and, eventually, several hundred ships were left in the harbor unable to get away. To induce anybody to carry on the ordinary pursuits of life when such an alluring alternative as gold mining existed, enormous wages had to be paid. Unskilled labor easily obtained \$10 a day and skilled labor perhaps twice that amount; even a cook could command \$300 a month. Prices rose correspondingly; candles sold at \$3, a tin pan at \$9, shirts at \$40, and a good pair of boots at \$100; a quarter was the smallest coin in circulation. It is estimated that by the autumn of that year there were 10,000 people in the district.

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By the late summer, news of the discoveries reached the East and caused widespread excitement. As the overland route was impossible until spring the more eager took to the sea. Some went to the Isthmus of Panama and across to catch vessels sailing up the west coast, but the majority chose the long route around Cape Horn. The fleet clipper ships then being built were in great demand; such was the crowd seeking accommodation that temporary houses were built on their decks. By the end of March, 1849, it was estimated that 17,000 had sailed for California. Then as preparations began for the rush across the plains, some 20,000 people gathered along the banks of the Missouri from Independence to Council Bluffs waiting until the grass on the prairies became high enough to feed the stock and make it safe to start.

In May the great march of the "forty-niners" began. Organized in caravans for mutual aid and protection against the Indians or in small groups, the line soon stretched out for miles across the prairies. Following the old Oregon Trail through South Pass, the emigrants struck over the semidesert region in Utah and Nevada, climbed the Sierras, and saw below the hoped-for Eldorado. The trip occupied about five months and haste was necessary if the emigrant wished to avoid the ghastly fate of the Donner party. In 1846 that party had failed to cross the mountains before the snows fell and fairly buried the group of about 80 people; half of them perished from starvation before rescuers came, and many of the rest survived only by eating the flesh of the dead. Before the innumerable trials and dangers that beset them, many of the forty-niners gave up and turned back; cholera broke out among them and soon the trail was lined with the graves of some 5,000. Yet great hopes and indomitable energy carried most of them through, and it is estimated that over 40,000 crossed the Continent in that year.

Meanwhile, as the news spread rapidly around the world, other countries began to contribute their quotas; from England, France, Germany, and the Scandinavian countries in Europe; from the mines of Mexico, Peru, and Chile; from the islands of the Pacific and from China men poured forth in search of gold. The gold output, estimated at \$5 million for 1848, rose to \$40 million the next year. In 1850 probably 100,000 people arrived. San Francisco, with less than 1,000 inhabitants in 1847, became a city overnight, with an estimated population of 50,000 early in 1850. Real-estate values rose 1,000 per cent or more; interest rates advanced to 5 per cent a month, though only 10 per cent a year was legal; and vigilance committees sprang up to provide the need for some form of social control in the absence of adequate governmental institutions. Gold seekers and others continued to pour into the state as the output of the mines increased. This output reached the maximum of \$65 million in 1853; thereafter it slowly but steadily declined until 1868 when

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it was only \$22 million. Immigration was checked and financial failures were heavy. Although more than \$450 million in gold is estimated to have been secured between 1848 and 1856 only a relatively few secured a fortune thereby. The winnings of the great majority probably averaged little more than the current rate of wages. With the decline in the output of its mines, California settled down to a more normal process of development; ranching, farming, commerce, and more scientific methods of mining were introduced; and, in spite of the fact that many of the gold seekers left for Australia, where gold was discovered in 1851, or for the diggings opened up in neighboring states, the population of California, excluding Indians, was 365,000 in 1860.

The scattering of the gold seekers soon led to new discoveries of the precious metals and, though the results never compared with the California output, the hopes aroused by each new opening were sufficient to attract considerable groups imbued with this speculative fever. Such discoveries were made in British Columbia, Idaho, Montana, Nevada, and Colorado and soon little mining camps or settlements sprang up in various parts of these almost uninhabited territories. Most of these settlements, largely dependent upon the uncertainties of mining, proved temporary in character; and the population was apt to scatter almost as quickly as it had gathered. Of the discoveries made at this time that at Pike's Peak, in 1858, caused the greatest excitement; the next year 100,000 people rushed across the plains to Colorado. "Pike's Peak or Bust" was the motto attached to their wagons; yet most of those who reached their goal soon returned—one case with the motto changed to "Busted, By Gosh!" reflected the common fate.

Yet they were always ready to start anew on hearing of some fresh discovery. The most important find at this time was the Comstock Lode in Nevada, the richest and most famous deposit of silver in the country, discovered in 1859. The opening of this vein practically marked the beginning of silver mining in this country, an industry which in later years became an important factor in the growth of settlements in the Far West. By 1860 in the region between the states bordering on the Pacific and west of Texas, Kansas, Nebraska, and Dakota there were something over 160,000 inhabitants, about half of them in what then constituted the territory of New Mexico. Thus only a bare beginning had been made in the settlement of this vast area.

The Pioneer. Before leaving this account of the westward movement a word should be said as to the human elements involved. Though migrating to the frontier was no child's task to be lightly undertaken, and great fortune seldom rewarded the emigrant, to most people the West stood for economic opportunities. In the early days when transportation facilities were poor, the journey, even to the Mississippi Valley, was beset with

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hardships and required ambition, courage, and endurance to undertake. For many, whose means were limited, it became still more arduous. Thus we hear of cases such as that where a man with his wife and five children proceeded to walk from New Jersey to Ohio carrying their worldly goods in a wheelbarrow; another couple with seven children carried all their property on their backs.

More typical were the sights described by Birkbeck in 1817, who wrote,

We are seldom out of sight as we travel on this grand track towards the Ohio of family groups behind and before us. A small wagon (so light you might almost carry it yet strong enough to bear a good load of bedding, utensils, and provisions and a swarm of young citizens and to sustain marvelous shocks in its passage over these rocky heights) with two small horses, sometimes a cow or two, comprises their all . . . A cart and single horse frequently affords the means of transfer; sometimes a horse and pack saddle. Often the back of the poor pilgrim bears all his effects and his wife follows naked footed bending under the hopes of the family.

Even after the advent of turnpikes, canals, and railroads eased the journey to the Middle West, the still longer trip to the Far West remained beset with greater hardships and dangers.

After the journey had ended and the emigrant had reached the chosen destination, he found his difficulties had only just begun, particularly if he settled upon new land in a frontier region. He had to readjust himself to a new environment, to new methods of farming, or to such other pursuit as he chose for getting a living. He often had to be content with a rather isolated life far from the advantages of near contact with the larger centers of civilization and their social institutions. He had in the main to supply his own wants and in so doing faced a life of hard and unceasing toil. But in owning his own land and home, though no more than a rough log cabin, in seeing his property develop, and in feeling his self-sufficiency, he enjoyed a sense of freedom and independence such as makes one of the strongest appeals to human nature. To obtain the economic opportunity and liberty that the West afforded, the energetic and ambitious gladly faced the hardships and the dangers of life on the frontier. It was this spirit of unbounded and unquenchable optimism, this indomitable energy and perseverance, this fearlessness of toil and danger, this dominating love of freedom, which underlay the settlement and development of the West. How much of human suffering, struggle, and idealism were involved the generations succeeding the pioneers will never realize; but it was upon these bases that the later development of the country was founded.

Political and Social Influences of the West. The rapid spread of the people over this Western territory was important not only for its direct influence upon our economic development, but in many other ways as

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well. In fact the West was the dominant factor in our political and social, as well as our economic, history throughout this period. Politically it brought a new section with new economic interests into existence, a section that soon attained great influence in national affairs and came to hold the balance of power in Congress when the North and the South were opposed. By the time of the presidential election in 1828, eleven new states, nine of them to the west of the Appalachians, had been added to the original thirteen; before 1860 nine more had been admitted to the Union.

Though their sparse population did not secure them so much influence in the House of Representatives as in the Senate, where equal representation of the states was provided, these additions gave the West relatively greater power. In fact the Senate has always provided the chief political strength of the less densely populated states. Because the population of the Southern slaveholding states grew less rapidly than that of the Northern nonslaveholding states, the former became insistent that the number of free states added to the Union should not exceed that of the new slaveholding states, for only thus could they maintain sufficient power in the Senate to protect their "peculiar institution" of slavery. This feature in our Constitution, as was planned by its framers, thus served to protect the economic and other interests of minority groups in the population.

The growing political power of the West and the characteristics and ideals of its people were well typified in the election in 1828 of the first Western president, Andrew Jackson, and the advent of what is known as Jacksonian Democracy. In most striking contrast to the line of his predecessors, who represented the statesmanship and ideals characteristic of the Old Dominion or New England, Jackson was a pure product of the frontier West. His Scotch-Irish parents had been among the group who came to this country in 1765 and settled in the uplands of Carolina, where he was born in 1767. In his twenties he moved to the frontier settlements in Tennessee, where he practiced law and became the first representative of that state in Congress. Later he achieved fame as a military leader, notably by his defeat of the British at New Orleans in 1815. But his popularity came to rest more upon that democratic spirit, so essential a characteristic of the frontier, which made him regarded as the champion of the middle and lower classes in their struggle against the upper classes. A born leader, a vigorous fighter both in defense of his country and the rights of common men, with but little education or what we would call culture, and with an open contempt for formalities, he secured in his lifetime a popular following which in its ardent enthusiasm was unequalled by that of any other president of the period, for he typified the rising spirit of democracy then coming into its own.

Just as in colonial times the conditions in a frontier land had served to promote democracy, so in the nineteenth century the free and open West, the land of economic opportunity, of individualism, and of freedom became the great nursery of this democratic spirit. Classes scarcely had had time to develop, all were on a nearly equal basis and each stood on his own feet with little fear or favor. There the hardships and relative isolation of frontier life developed initiative, adaptability, individualism, and a sense of freedom; there was found an opportunity or a refuge for the discontented, the downtrodden, or the more individualistic of the East. This spirit was reflected in the social and political institutions; the constitutions of the new states were more democratic in character and the possession of property as a prerequisite for most office holding or franchise rights was generally abolished.

Yet the demand for greater democracy was not confined to the West. In the rising industrial and commercial centers of the East there was a steadily increasing group of wage earners who began to feel the greater gap between them and the employing class and who developed a class consciousness that led to organization and the formulation of demands for economic and political reforms. From the decade of the twenties, they began to enter the political arena and, aided by the movement toward a general extension of universal manhood suffrage which occurred at this period, they furthered the development of a more popular form of government as well as the passage of laws designed to promote a greater degree of industrial democracy.

The way in which the West helped to shape the character and ideals of the American people and the product that it was capable of turning out are well illustrated in another president—Abraham Lincoln. His forebears had first settled in New England in the colonial period. Later, with that restless, migratory spirit that characterized the people, they had moved in successive stages to Pennsylvania, to Virginia, and then with the early settlers of that state to Kentucky. In 1816 when the boy Abraham was seven years old his parents moved across the Ohio river to Indiana, made a clearing, erected a half-faced log cabin and there, amid the privations of frontier life, the mother of Abraham Lincoln died. Up to 1830, when he attained his majority, this boy had succeeded in obtaining about one year of schooling in all. He then joined in the rush to the rich prairie lands of Illinois, which were just being opened up, and settled in Sangamon County. There he remained to take an active part in the rapid development of the country, helping to build log cabins, survey roads, administer justice, and further the growth of the social and political institutions of the community; until he was called to the service of the nation, first as Congressman and then as President to guide the country through the great struggle to preserve the Union.

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So completely a product of the frontier, his traits well typify the characteristics which that environment tended to nurture and develop in the American people. His physical strength, his adaptability, his patience, endurance, and rare common sense were things fostered in the prolonged and arduous struggle to get a living by converting the wilderness into a flourishing community. His slight defects, the ungainliness, the crudity, the lack of a broadly cultural training, were also inevitable concomitants of a rough, undeveloped, and unsophisticated society. But, above all, the tolerance, the boundless charity, the spirit of true democracy, the firm upholding of the fundamental moralities, and the great humanity of the man were among the great contributions of the frontier to the American character. Because he so completely embodied the best that came out of this frontier environment, the environment that did so much to shape the characteristics and ideals of the nation, Abraham Lincoln, often looked down upon and even reviled by his contemporaries, has come to be enshrined in the hearts of the American people as *the* typical American—typical of that nineteenth century when the West so dominated the life of the nation—the greatest American of that period.

CHAPTER XIX

TRANSPORTATION AND COMMUNICATION, 1816-1860

Introduction. The difficulties that arose from the lack of adequate and cheap transportation facilities during the preceding period have already been described. It is obvious that the westward movement of population only served to increase this need for internal improvements. The available waterways chiefly determined the location of the earlier settlers and as the region adjacent to these waterways was occupied and later comers were forced to settle at a distance the demand for improvements grew the more insistent.

Nor was there any development in the field of economic activities that was destined to exercise more far-reaching and revolutionary effects upon the economic organization of the country during this period than the introduction of improved facilities for transportation. This development hastened the westward movement; it widened the markets for the products of every region, thus furthering specialization and division of labor, increasing trade, and augmenting the productive capacity of the nation; it helped to break down the local or provincial economy of many sections, hastened the growth of a national economy, and helped to increase trade that was international in scope.

Roads and Turnpikes. For the most part the construction of roads was left to the local authorities, the towns and counties, whose work was sometimes supplemented by aid and supervision from the state. Much of the actual work was done by residents of the locality who were given the option of supplying carts and draft animals and putting in a certain number of days of work on road building or of paying a road tax. The resulting roads were apt to be the poorest that could be used at all and were seldom kept in proper repair. Furthermore, since they were usually constructed primarily to meet the local needs, they failed to provide satisfactory facilities for long-distance traffic. It was largely to meet this need that the states appointed highway commissioners and afforded some financial aid. For similar reasons the construction of turnpikes by private companies was generally confined to places where a considerable volume of traffic, either local or long distance, existed so that the tolls collected would be sufficient to yield an adequate return on the outlay involved.

When it came to important roads for intersectional traffic the aid of the Federal government was invoked. The comprehensive plans drawn up by Gallatin in 1808 with this in view have been mentioned; but the Cumberland Road or National Turnpike, construction of which was begun before the War of 1812, was the only important project actually carried out. Its building was delayed by the war but in 1818 it was finished to Wheeling on the Ohio River, a distance of about 130 miles from Cumberland, Md., where it started. The cost of this section was \$13,000 a mile. It was planned to extend it westward to Missouri through the state capitals. Columbus was reached in 1833 and Vandalia, Ill., where it stopped, in 1844; but the completion of the latter portion was left to the states as the government finally turned over the whole road to them. A few other roads were built by the Federal government, but there was too much opposition to permit important undertakings to be carried through.

This opposition arose in part from sections unlikely to benefit from the undertakings and in part from those who questioned the constitutionality of such action. Though Presidents Jefferson, Madison, and Monroe all favored internal improvements, they felt that a constitutional amendment was desirable to permit Federal undertakings. In 1817 Madison vetoed a bill appropriating money for building roads and canals; in 1822 Monroe vetoed another bill providing for the collection of tolls on the Cumberland Road to be used for its repair, though intimating that Federal appropriations for improvements of national importance might be made. Later he approved an appropriation for continuing the work on the road. After the administration of John Quincy Adams, the Federal government did little to further road building. With the introduction of railroads, which provided a far superior method for long-distance traffic, most road building was left to be carried on by local authorities.

Canals and Waterways. The lower cost of transportation by water turned the attention of the country to the possibilities of canal construction and the improvement of the navigable waterways with the result that the years from the end of the War of 1812 up to the panic of 1837 became the great period of canal building. To finance the cost of a canal of any length required such an outlay of capital that private enterprise was seldom prepared to undertake it and, though a few of the shorter canals were built in that way, most of them were state undertakings.

By far the most important and successful was the Erie Canal connecting Lake Erie at Buffalo with the Hudson River. Here the lay of the land was most favorable and the construction, begun in 1817, was finished in 1825, with a great celebration typical of the rejoicing that spread over the nation on the completion of each new great project for furthering its economic development. The canal cost about \$8 million and, being 40

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feet wide and 4 feet deep, could accommodate 30-ton barges. Its success was immediate, as was that of another canal connecting the Hudson River with Lake Champlain which had been opened in 1822; numerous branches were soon built and work begun to increase its depth to 6 feet. Before the canal was opened it was estimated that it cost from \$80 to \$100

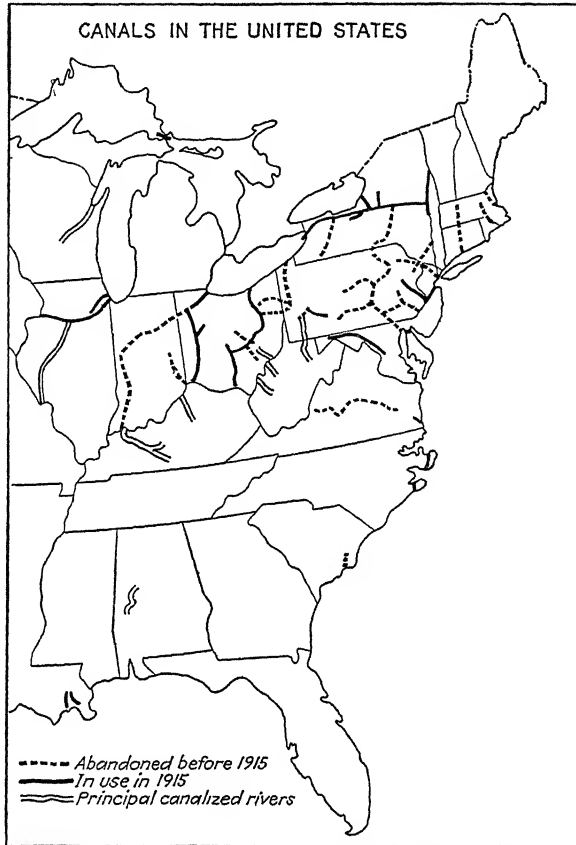


FIG. 16.—Canals in the United States. (Reproduced from B.H. Meyer, "History of Transportation in the United States before 1860," Washington, 1917, by permission of the Carnegie Institution of Washington.)

a ton to carry goods from Buffalo to New York, a cost three times the value of wheat at New York and six times the value of oats. The canal so reduced this that between 1830 and 1850 the average cost was less than \$9 a ton.

This route was at once adopted by those migrating to the West from New England or New York. The emigrant, boarding a canalboat at Troy and progressing about four miles an hour, reached Buffalo in four days. The rich wheat-growing region in western New York profited greatly

and Rochester soon became a flour-milling center. The produce of this section and the lands bordering on Lake Champlain, which had formerly been carried into Pennsylvania or to Montreal, was at once diverted to New York. The tremendous advantage which that city thus gained greatly aided its rapid growth and the jealous rivalry of other seaboard cities led to the construction of other canals in the hope of securing similar advantages.

Philadelphia was particularly disturbed at this achievement of New York for, theretofore, it had enjoyed most of the trade with the trans-Allegheny region. Its citizens at once began to plan a canal to connect with the Ohio River. The great obstacle was the intervening mountains; how to surmount the difficulties which this barrier presented was a serious problem. It was first proposed to tunnel the mountains. A tunnel, being uncommon in those days, was explained as being "a passage like a well dug horizontally through a hill or a mountain." But this plan had to be abandoned in favor of a portage railroad of 36 miles over the mountain. The main line running from Harrisburg to Pittsburgh was started in 1826 and finished in 1834 at a cost of some \$12 million. The portage railroad considerably increased the difficulties and costs of operating the canal, which never secured much through traffic, except in the less bulky westbound commodities.

Maryland was even less successful, for the construction of the Chesapeake and Ohio Canal running beside the Potomac River, revived in 1828 to succeed an earlier enterprise that had become bankrupt, was stopped after reaching Cumberland, Md. in 1850, some \$11 million having been spent upon it. Its only important traffic was coal obtained from the mines just beyond Cumberland. In Virginia plans to construct a waterway connecting with the West by way of the James and Kanawha rivers were under way even before the Revolution. Chiefly through state aid, the section along the James River from Richmond to Lynchburg had been completed by 1840; but it never got much beyond that point and so little traffic developed that it proved a failure financially. In New England, Boston was anxious to secure better transportation facilities to the West and proposals were made to build canals connecting with Albany and Montreal; the obstacles in the way were obviously too great and the city had to await the coming of the railroad.

In addition to the efforts to secure waterways to the West the states along the Atlantic coast developed a series of canals to facilitate coast-wise trade and in other cases improved the rivers to promote local traffic. The Delaware and Raritan Canal running across New Jersey and built by private enterprise was finished in 1838 and proved fairly successful in securing a considerable amount of coal traffic. Another canal across the northern portion of New Jersey was built by the Delaware and Hudson

Canal Company chiefly to get coal to New York. In 1830 the Chesapeake and Delaware Canal, aided by three states and the Federal government, was completed at a cost of \$2,250,000 and succeeded in securing a considerable amount of traffic chiefly in lumber, grain, and coal coming down the Susquehanna and moving to Baltimore and Philadelphia. In the South the construction of the Dismal Swamp and the Albemarle Sound canals made it possible for crafts of light draft to avoid the dangerous ocean passage around Cape Hatteras.

Outside of these canals for aiding coastwise traffic and those connecting with the West, not much was done in the Atlantic coast states except in Pennsylvania. There a number of short canals or river improvements were made to help get the growing output of coal to market. Also canals were built by the state along the Susquehanna and in the western portion along the Beaver connecting the Ohio River with Lake Erie, in part to satisfy the demands of sections that did not gain from the main line across the southern portion of the state. Political jobbery and much waste of public money attended these state enterprises.

In the West the state of Ohio aided by a Federal land grant took the lead in this activity and soon was embarked upon an elaborate scheme of building that resulted in nearly 800 miles of canals. Two main lines stretched across the state from the Ohio River to Lake Erie. That from Portsmouth to Cleveland, started in 1825, was opened in 1832; that from Cincinnati to Toledo, 10 years later; and numerous branches were built connecting with them. In the main this system proved chiefly useful in carrying local produce to the market but it helped to divert some products of the Ohio Valley from the Mississippi to the Erie Canal. In Indiana the Wabash Canal, 459 miles in length, connecting the Ohio River with Lake Erie at Toledo was begun in 1832 but not finished until 1853 and it never secured much traffic. In Illinois the Illinois and Michigan Canal connecting Chicago with the navigable waters of the Illinois River was started in 1836. In spite of aid from a Federal land grant, the state's financial affairs became so involved that the canal was not completed until 1848, after which it proved fairly successful.

In the meantime Canada had constructed the Welland Canal around Niagara Falls, opened in 1830. Other canals around rapids in the St. Lawrence River provided another water route from the Great Lakes to the Atlantic rivaling the Erie Canal, and the opening of the Soo Canal, built by Michigan in 1855, completed the system.

Although the great activity of the West in canal construction came to an abrupt end with the panic of 1837, a few enterprises already well started were subsequently completed. The rapid increase in state debts incurred for this and other purposes combined with the fact that many of the canals yielded little revenue helped to create a crisis in state finance

and a reaction against state undertakings generally. In some states constitutional amendments were adopted prohibiting such undertakings. In many cases the credit of the states was so impaired as to make the financing of new canals impossible and the completion of those already started extremely difficult. Finally, the growing success of the railroad convinced many that it offered a more efficient means of transportation. However, it was estimated that by 1850 there were some 3,700 miles of canals in the country, over half of this mileage having been constructed during the thirties.

River and Harbor Improvements, and the Steamboat. Of far greater importance to most of the Western country than the canals were the waterways provided by the Mississippi River and its branches. Yet the difficulties of navigation, particularly on the Mississippi, were great and resulted in heavy losses of boats and cargoes and a strong demand for improvements. As this traffic was of national importance, it was urged that the improvements should be undertaken by the Federal government, the more so since leaving it to the numerous states would not ensure the needed improvements in the route as a whole. So, beginning in 1824, small appropriations were made for this purpose; but up to 1860 the total outlay by the government on the Western river system was less than \$4 million, a sum insignificant as compared with the expenditures of a later date. The government also made appropriations for improving both rivers and harbors in other sections of the country and, unlike the case of roads and canals, this assistance continued to be made after 1828, though the total amount thus spent up to 1860 was relatively small.

Of vastly greater importance in its effects upon commerce than the improvement of the riverways was the introduction of the steamboat, particularly in the West. Fulton had made his first successful steamboat trip from New York to Albany in 1807. The advantages of this new device were not long in obtaining recognition, at least for inland waters. On the ocean the steamboat was introduced very slowly; in fact it was not until about 1840 that it began to be regularly used in the trans-Atlantic trade.

Probably there was no place in the world where the introduction of the steamboat at the time was of greater importance or was more eagerly welcomed than in the Mississippi Valley. It has been pointed out before that the river system furnished almost the only means of transportation by which the greater portion of the produce of the region could be carried to any other than the local markets. Before the advent of the steamboat this produce had been loaded on rafts, flatboats, or keelboats and floated down the river. Although the direct cost involved in this method of shipment was small, it was also necessary to take into consideration the slowness of the trip and the heavy losses arising from trying to guide craft so

difficult to manage through the dangers that lurked along the way. Still, as late as 1825, it was a common practice for farmers to load their surplus products on a raft and float them down the river to the New Orleans market. The estimated receipts at New Orleans of goods from the interior rose from over \$4 million in 1805 to nearly \$12 million in 1822.

When it came to carrying goods upstream, the situation was very different. Moving against the current was a slow and arduous task and it took three months to go from New Orleans to St. Louis. The cost was so great that few goods could stand it and, previous to 1817, it was said that 20 barges making one trip a year sufficed for the shipments up the river from New Orleans. On the Ohio a larger number of keelboats plied back and forth between Louisville and Pittsburgh. Consequently the regions bordering on the Ohio and upper Mississippi secured such goods as were needed from outside chiefly from the East. With the advent of the steamboat a great change took place.

In 1811, as an inducement to build steamboats, Louisiana gave Fulton a monopoly of this type of navigation on the Mississippi within its boundaries. The "New Orleans," the first steamboat on Western rivers, was at once built. At first there was much skepticism as to its ability to make the trip up the river, but after 1817 when a boat ran from Louisville to New Orleans and back in 41 days, this doubt was dispelled. Until then only seven steamboats had been built in the West, owing partly to these doubts and partly to the monopoly given Fulton. This monopoly grant aroused vigorous opposition and many protests from the other states. The constitutionality of the grant was denied and Fulton's patent rights were questioned, and after 1820 the privilege was practically abandoned. It was not until the decision of the Supreme Court in 1824 in the case of *Gibbons v. Ogden*, involving a similar monopoly granted by the state of New York, that such a grant was held to be unconstitutional as state interference with interstate commerce.

Thereafter steamboat building and navigation increased rapidly. By 1825 there were 125 steamboats in use; in 1856 over 600. Up to 1856 nearly 2,300 steamboats had been built and, though the losses were extremely heavy, the total steamboat tonnage on Western rivers in 1847 was claimed to be greater than that of the whole British Empire. During the early portion of the period the use of boats of various types for carrying downstream increased along with the steamboats. As the latter were improved and the costs of transportation reduced, they secured an increasing proportion of the downstream traffic as well as practically all of that moving upstream. Boats floating downstream had required from 20 to 30 days to make the trip of nearly 1,500 miles from Louisville to New Orleans and over 90 days for the return. The steamboats, almost at the start, made the down trip in 12 days and the return in around 36 days.

The trip upstream was soon cut so that in the thirties the fastest boats were making it in less than seven days and in the fifties in less than five days.

Not only was there a great saving in time but also in the costs of transportation, particularly upstream. In consequence many commodities formerly brought into the interior from the Eastern seaports were brought up the river from New Orleans and sold at much lower prices than theretofore. These improvements thus enabled the Western people to obtain higher prices for their own products and to buy goods brought in from outside at lower prices than ever before. Naturally this proved a great stimulus to the trade and general development of the whole region. As one writer states, the steamboat "contributed more than any single cause, perhaps more than all other causes which have grown out of human skill, combined, to advance the prosperity of the West."

On the Great Lakes the introduction of the steamboat was of much less importance, for the conditions there made the use of sailing vessels comparatively easy. The first steamship on these waters was built on Lake Ontario in 1817; the following year another was built on Lake Erie. The opening of the Erie Canal and the later influx of settlers into the region bordering on the Great Lakes was a great stimulus to commerce. The subsequent increase of the tonnage of vessels on the Great Lakes was very rapid, so that in the fifties the total surpassed that on the Mississippi River system. The great portion was made up of sailing vessels, and steamboats constituted only about one-third of the tonnage on these waters.

The Introduction of Railroads. Of vastly greater importance as an improvement in transportation facilities for the country as a whole was the introduction of the railroad. In fact few things have done more to change the economic organization of the more advanced countries of the world in the last 100 years than this event. Its revolutionizing effects can scarcely be exaggerated. Today the railroad is a commonplace; we take it for granted and never stop to consider what it means in our lives. However, barely a century ago the very possibility of such a device was doubted and even scorned by men considered wise. To convince people that such a thing was practicable was one of the first obstacles to be overcome.

Rails upon which cars were drawn by horses had been occasionally used in connection with coal mines in England in the eighteenth century, but when it came to the suggestion that steam engines be used for motive power the world was skeptical. We are told that such statesmen as Gouverneur Morris and Chancellor Livingston "demonstrated conclusively," as they thought, "that a railroad under any circumstances was impossible." Men who advocated such a thing were considered fit candi-

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dates for an insane asylum; and pictures of the dangers and horrors of such a method of travel were conjured up by many. An English writer in 1825 said,

It is certainly some consolation to those who are to be whirled at the rate of eighteen or twenty miles an hour by means of a high pressure engine to be told that they are in no danger of being sea sick while on shore, that they are not to be scalded to death or drowned by the bursting of the boiler and that they need not mind being shot by the scattered fragments or dashed in pieces by the flying off or breaking of a wheel. But with all these assurances we should as soon expect the people of Woolwich to suffer themselves to be fired off in one of Congreve's rickochet rockets as to trust themselves to the mercy of such a machine going at such a rate.

Others dwelt on the danger of disease said to be due to rapid travel, or the fires that would be set by sparks from the locomotive, or the frightening of the cows which would spoil their milk. Some towns protested that they did not want their peace and quiet disturbed by a railroad. Even religious opposition appeared. When some people in an Ohio town requested the use of the schoolhouse to discuss the question whether railroads were practicable the school board refused to permit it saying,

You are welcome to use the schoolhouse to debate all proper questions in, but such things as railroads and telegraphs are impossibilities and rank infidelity. There is nothing in the Word of God about them. If God had designed that His intelligent creatures should travel at the frightful speed of fifteen miles an hour, by steam, He would have clearly foretold it through his holy prophets. It is a device of Satan to lead immortal souls down to Hell.

Such incidents deserve relating, not because they seem amusing today, but because they so well illustrate a problem that is constantly confronting the world in connection with all new ideas whether in the field of business or elsewhere. Conservatism of thought and action has its advantages in preventing mistakes and unwise innovations, but it involves the danger of checking social progress. Fortunate indeed is the nation whose people possess that inquiring type of mind, ever searching with scientific imagination for the truth, and that freedom from inertia and pure habit in action which enables them quickly to distinguish the good from the bad and hastens the introduction of that which makes for the common weal. It is widely believed that conditions have helped to develop such characteristics in the people of this country to a higher degree than in most countries. What this has meant in furthering the economic and social progress of the nation can hardly be calculated, but the importance of cultivating such traits cannot be exaggerated. It must be added, however, that whenever changes and innovations seem likely to injure the economic interests of any group, opposition is certain to develop. In the case of

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the railroads such opposition arose from the owners of inns, stagecoaches, ferries, and canals. Economic history is filled with illustrations of the operation of such obstacles to progress.

To overcome the disbelief in the possibility of railroads' technological improvements had to be made. Motive power, the chief problem, required much experimenting and many failures before the steam engine was made practicable. Of the first four locomotives brought over from England only one got so far as to make a trial trip. The first ones built were so heavy that they smashed the track, or they were unable to draw a load up an appreciable grade, or they ran off the track in going around a curve; and they were constantly breaking down. Hence at the start various other sources of motive power were employed. Sails were tried by some, a device like a handcar by others. The horse was the chief reliance and it was found possible in this way to draw two cars with 55 people nine miles an hour. When one railroad, in order to determine the respective merits of the horse and the locomotive, arranged a race between two trains so drawn, that with the locomotive took the lead at the start but soon broke down and the horse won out. However, American ingenuity before long overcame these difficulties; a suitable roadbed and iron rails were devised and the locomotive made practicable. The doubters were soon compelled to give way before the great enthusiasm for the new means of transportation that swept over the country.

Still there remained big problems of organization, management, and finance. At the start it was expected that this new road would be used in the same way as other roads or turnpikes—that is, that each user would employ his own cars and motive power. Although, when the locomotive displaced the horse, it was obvious that the railroad would have to supply the motive power, on some railroads cars were supplied by individuals for a considerable period. The difficulty in organizing the traffic on a single-track line also necessitated placing control in the hands of the company and the use of frequent sidings. Even then, many difficulties arose from the lack of quick means of communication between stations until the introduction of the telegraph. Another difficulty arose from the fact that there was no uniformity in the gauge. The standard gauge was generally used in the New England and Middle Western states and a five-foot gauge in the South; in the Middle Atlantic states a great variety was found. This situation obviously checked long-distance shipments of freight through the necessity of unloading and reloading. In addition, the lack of bridges over the large rivers made ferries necessary. This situation, combined with the fact that many railroads were so short that through shipments had to be carried over a number of different roads seldom organized so as to facilitate such movement, proved a further handicap.

Financing of the Railroads. With but few exceptions the railroads were built under charters granted by the states to corporations. This form of organization was necessary to obtain the relatively large amounts of capital required for such undertakings and to provide the centralized management essential to successful operation. Private initiative was thus largely responsible for determining the general character of this country's railroad system and its mode of operation. The fact that the states were often appealed to for financial assistance, generally in the form of subscriptions to the stock of different companies, gave them some influence in determining the lines actually constructed. The charter provisions included many features designed to protect the public interest.

Private capital was prepared to supply a much larger proportion of the funds required than in the case of other forms of internal improvements at this period. This was in part owing to the fact that many of the earlier roads, being located in regions where population and traffic were most dense, proved financially successful from the start. Furthermore, these lines were commonly so short that no very large amounts of capital were required to finance them. Thus there were numerous instances where, when subscription books for the stock of a new railroad were opened, long lines were formed by investors eager to secure stock. Some even hired pugilists to hold their places in the line, and all the stock offered was quickly taken up. On the other hand, in the case of the longer roads, particularly those built in the more sparsely populated and less wealthy regions, public aid was commonly sought, usually in the form of town, city, county, and state subscriptions for the bonds or stock.

When the panic of 1837 swept over the country and some of the states that had gone heavily into debt for various forms of internal improvements, many of which had proved unprofitable, found their finances seriously involved and their credit impaired, a reaction took place. Thereafter, the states, at least, were much less active in extending financial aid, though many local political units continued to do so. Beginning in 1850, some Western roads obtained aid in the form of land grants from the Federal government. Hence it was necessary to fall back upon private capital for the main support and, as the railroad's success in developing traffic increased, this was the more easily obtained. Additional aid of this sort was obtained from abroad, where investors began to take an interest in American railroad securities and, after about 1838, "Yankee rails," as they were called, were dealt in on the London stock exchange.

In New England almost no state aid was given the railroads; Massachusetts made a few loans after 1837. In New York the series of short railroads that finally completed a line from Albany to Buffalo was built with private capital. The demand for a railroad from New York to Lake Erie through the southern counties of the state led to an advance of over

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\$6 million to the New York and Erie and small loans to several other roads. Yet the towns, cities, and counties subscribed for various railroad securities a sum several times as great. In Pennsylvania and Maryland some aid was obtained from the state but more from cities and towns; Philadelphia and Baltimore subscribed heavily in the hope of establishing through rail connections with the West. In Virginia the state subscribed to three-fifths of the stock of many railroads and by 1860 had aided railroads to the extent of some \$21 million. A difficult portion of one road over the mountains was built by the state; in other cases the state guaranteed railroad bonds. A similar policy of stock subscriptions or guarantee of bonds was common among the other Southern states. In Georgia the state itself built the Western and Atlantic connecting Atlanta with Chattanooga and continued to operate it, though without great success, until 1870.

In the West, where distances were greater, population and traffic less dense, and capital less abundant, there was at the start more dependence upon public support. In 1837 Ohio passed an act promising state subscriptions of \$1 for every \$2 of stock subscribed for railroads in the state. At the same time Indiana, Illinois, and Michigan launched out on an elaborate system of internal improvements, including railroads, to be constructed by the state. Immediately afterward the credit of the states became so impaired that it was impossible to finish the construction of the railroads actually begun and finally the states sold them to private companies, often at a heavy loss. In the Southwestern states financial aid was generously extended and commonly took the form of loans, guarantees of railroad bonds, or subscriptions to stock on the part of the state and loans or stock subscriptions on the part of the smaller political units. As in the case of the Northern states, the impairment of state credit after 1837 put an effective check on aid from that source.

The financial inability of the Western states combined with the presence of public land within them in part explains the resort to the Federal government for assistance and the resulting series of land grants in aid of railroad construction beginning in 1850. The Federal government made these grants to the states which in turn conveyed them to the railroads. The form that these grants took has already been described. The first grant in 1850 gave land in the states of Illinois, Alabama, and Mississippi for a railroad to be built from Illinois to Mobile, the lines that now make part of the Illinois Central and the Mobile and Ohio railroads. A few more grants were made in 1852 and 1853 and a large number in the years 1857-1858, when the first period of railroad land grants came to an end. Except in the case of Florida, Alabama, and Michigan all these grants were located in states bordering on the Mississippi River and they totaled over 30 million square miles.

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More indirect forms of aid to the railroads were often given by various provisions of the charters granted to them by the states. Previous to the middle of the century, when the states began to pass general incorporation laws for railroads, each charter required a special act of the legislature. Thus the provisions of the charters varied considerably even in a given state, a condition that led to much undesirable lobbying in connection with the charters. Some railroads were given a monopoly of the right to build a line in certain districts for a varying period of years, as an inducement for the investment of capital. This was so generally disliked by the people that it was seldom granted once the success of railroads was established. Exemption from taxation for a period of time was a frequent privilege. Although in a few instances lotteries were authorized to help raise capital, by this period public opinion rather frowned upon such a method. There were many cases, however, particularly in the South, where railroads were authorized to do a banking business or establish a bank to aid in their financial operations. This was essentially unsound from the point of view of good banking, for these banks were often used as a device to raise funds through the issue of notes and frequently became so involved in the railroad's affairs as to get into financial difficulties and make their notes of little value, with consequent losses to the public.

Along with these privileges the charters also contained some restrictions designed to protect the public. In certain instances the rate of dividend was limited, frequently to 10 per cent, which was high enough to attract capital but resulted in inefficiency where the road was able to earn more. In other cases limitations were set upon the charges that railroads were allowed to make, and many charters included a provision allowing the state to purchase the railroad after a specified date. However, as the demand for railroads increased, there was a tendency to impose fewer and fewer restrictions for safeguarding the public interest.

Progress in the Construction of Railroads. Once the practicability of the railroad had been established and a realization of its great possibilities became general, all the enthusiasm and energy back of the movement to hasten the development of the country eagerly turned to this new device. Few now stopped to question such projects. The completion of each new link in the network was celebrated as a great event, and the belief that there could not be too many railroads became an article of faith among those possessed by that vision of the great future of the nation which the rapid progress of events seemed to bring visibly nearer with each day's setting of the sun.

On July 4, 1828, ground was broken for the first important railroad in the country—the Baltimore and Ohio—by Charles Carroll of Carrollton, signer of the Declaration of Independence, who thus helped to initiate

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another revolution, this time in the world of commerce. In 1830 the country had about 23 miles of railroad; by 1840 this had been increased to over 2,800 miles. (See the map on page 350.)

An important factor in pushing railroad construction, as in the earlier canal building, was the desire of the commercial cities of the coast to secure connections with the interior, especially the West. Cities such as Boston or Charleston, so situated that canals were impracticable, now eagerly turned to the railroad. Savannah, Charleston, Baltimore, Philadelphia, and Boston all became active in pushing the construction of such roads, but no railroad had crossed the mountains in 1840. The most rapid construction during the decade took place in the Middle Atlantic states, where most of the lines were short and afforded little opportunity for long-distance travel. Still, by 1840, it was possible to travel by rail from New York to Washington and through the lowland section of the South from the Potomac to Wilmington. In New York a series of short lines paralleled the Erie Canal from Albany to Syracuse; in New England the only important lines radiated from Boston. West of the Appalachians about a dozen lines had been started, but none of these was as much as 100 miles in length in 1840.

In the decade 1840-1850 the general depression following the panic of 1837 increased the difficulties in financing railroad construction, especially in the West. However, this affected railroads much less than canals, and by 1850 the railroad mileage of the country—over 9,000 miles—had more than tripled. Much the greater portion of the construction during this decade was located in New England, which by 1850 was provided with a very fair system. Connections with the West had been made at Albany and at Ogdensburg. In the middle states the Erie, the Pennsylvania, and the Baltimore and Ohio lines still fell short of reaching their western objective points, though the series of lines stretching westward from Albany to Lake Erie had been completed. In the South the only important addition was the completion of the lines from Charleston and Savannah to Atlanta and the connecting of that city with Chattanooga. In the West the construction of a line across Ohio from Cincinnati to Sandusky and another across Michigan from Detroit to Lake Michigan were the only significant accomplishments. It can thus be seen that up to about the middle of the century the railroads of the country had not been developed to the point where they provided more than the bare beginnings of a system for long-distance and intersectional movement of traffic. It remained for the next generation to witness such an accomplishment; but the succeeding decade alone was destined to make great progress toward the attainment of this objective.

This decade, 1850-1860, was one of great business activity and general prosperity, equaled in this respect by but few decades in the history of the

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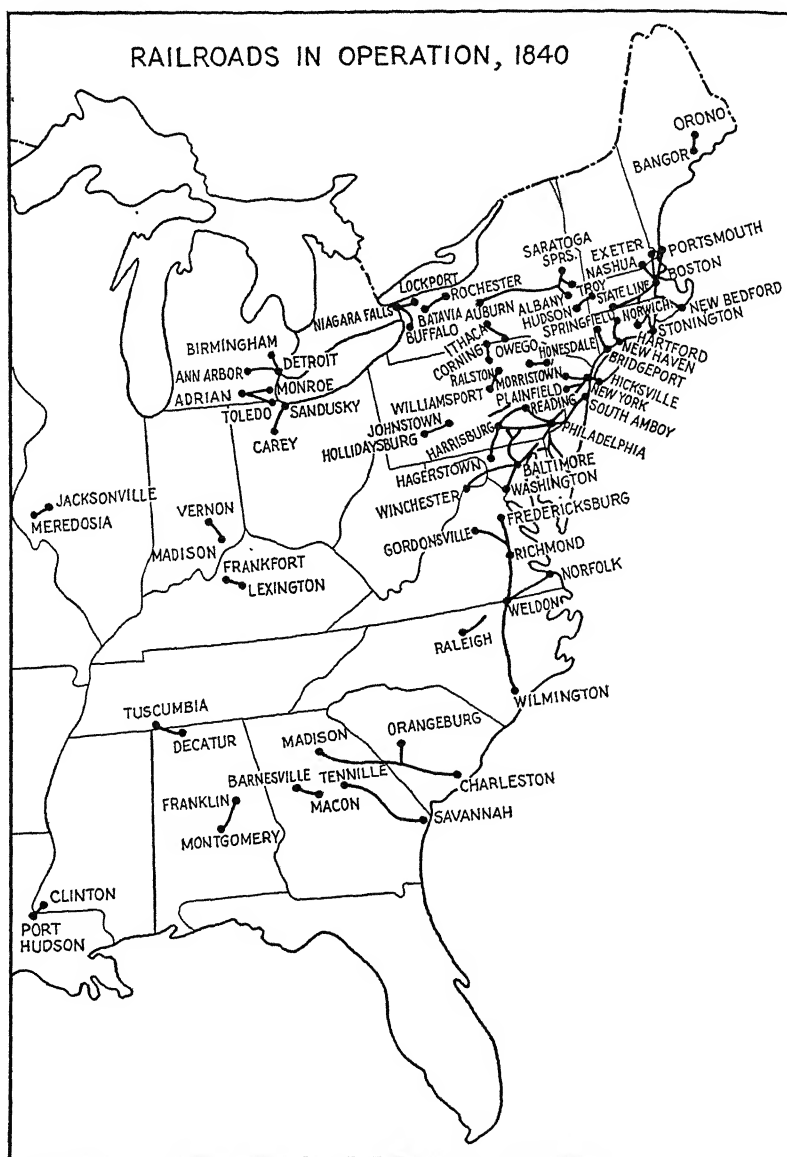


FIG. 17.—The railroad system, 1840–1860. (Reproduced from C. O. Paullin, "Atlas of the Historical Geography of the United States," New York, 1932, by permission of the American Geographical Society of New York.)

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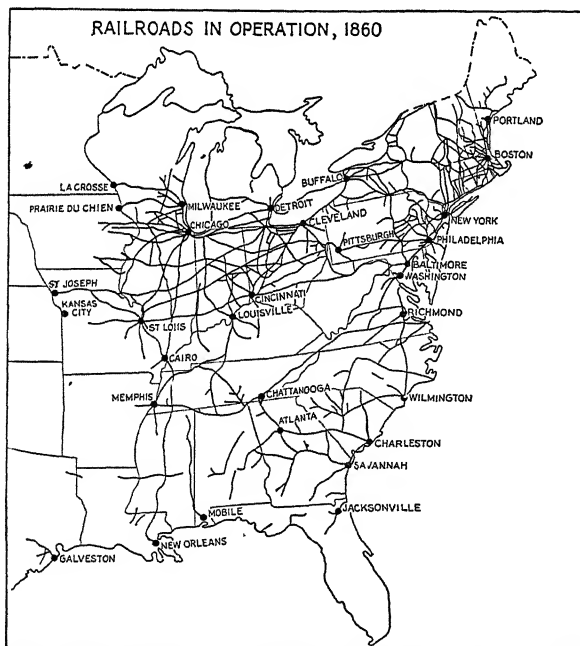
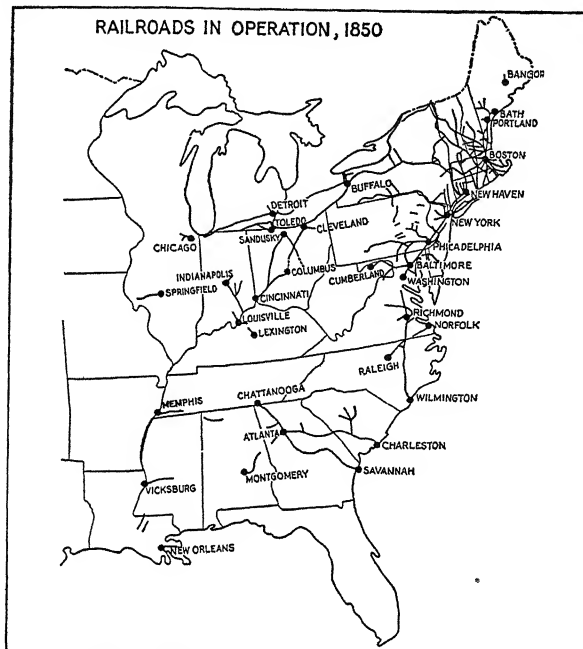


FIG. 17.—(Continued.)

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country. Under these favoring conditions railroad construction was undertaken on an unprecedented scale. As a result the railroad mileage of the country was more than tripled, rising to over 30,000 miles—about half the total railroad mileage of the world at that time—and it is estimated that \$800 million was invested in these new lines. In fact construction was pushed so rapidly and financed by such methods that some of the Western roads became bankrupt—a situation that helped to bring on a panic in 1857. The difficulties of these roads arose, in part, from the fact that in the less densely populated regions it took time to develop sufficient traffic to afford a fair return on the investment; in part they were caused by the unsound practice, which became fairly common at this period, of raising a large proportion of the needed capital by the sale of bonds; the stock was sold at a low price or given to the purchasers of bonds. The interest on the bonds created a heavy fixed charge which proved financially disastrous when the earnings were small at the start. The panic was a short sharp financial crisis from which the country quickly recovered, but it put a temporary check on railroad construction.

Much the greater portion of the new construction during this decade was in the states of the old Northwest and so rapidly was it carried on that by 1860 all of this region except the northern parts of Michigan and Wisconsin was provided with a fairly satisfactory system. About the middle of the decade the construction of railroads stretching westward from the Mississippi commenced and by 1860 there were a number of lines extending about 100 miles or so into Iowa; one reached clear across the state of Missouri. South and west of Missouri, however, only a few short lines, located in Louisiana and Texas, were to be found. The decade also brought considerable development of the railroad system in the South. A line from the Ohio River to New Orleans was opened up and Chattanooga was connected by different railroads with Richmond, Louisville, and Memphis. Yet, except for the facilities thus secured, the South was still very inadequately provided with a system that could facilitate long-distance movement of freight, a fact that later proved a serious handicap for the Confederacy on the outbreak of war. Most of the Southern railroads radiated from the upland cotton belt to the various seaports, but failed to provide a satisfactory system for traffic moving in other directions. In the Northeastern states construction during this period helped to fill in gaps in the network of the system and to complete connections with the new lines to the West.

The most important result of the railroad construction of this period was that the portion of the country east of the Mississippi and north of the Ohio and Potomac rivers for the first time secured a system that provided at least fair facilities for long-distance and intersectional movements of traffic. Thus, the Hudson River Railroad from New York to

Albany was completed in 1851; during the same year the Erie reached Lake Erie, and the following year the Pennsylvania entered Pittsburgh. In 1853 the Baltimore and Ohio reached Wheeling, and Chicago secured through rail connections to the East.

In 1857 the whole country joined in the great Railroad Celebration marking the establishment of connections between St Louis and New York, which had been made in 1855. The difficulties that still attended such long-distance travel can be judged from the fact that this trip involved five changes of cars, two short steamboat trips, and two ferry trips. Still, to a generation accustomed to horseback and stagecoach, this was a marvelous achievement and they rejoiced accordingly. The lack of a standard gauge and of bridges over the larger rivers, combined with the great number of small separate lines over which traffic moving any distance had to pass, still stood in the way of the most efficient transportation service. However, some progress in removing the last-named difficulty was being made at this time, when in July, 1853 a group by uniting the series of lines between New York and Buffalo laid the foundation for the New York Central system. The Pennsylvania also began to acquire an interest in connecting railroads.

Railroad Rates and Traffic. The variations in railroad rates were such that generalizations concerning them are difficult. Yet they are important as giving some idea of the savings in transportation costs which the railroads made possible. A tabulation of passenger fares made in 1848 indicates that in New England they averaged between 2 and 3 cents a mile; in the Middle Atlantic states around 3½ cents; in the West slightly under 4 cents; and in the South between 4 and 5 cents. Freight rates were also lowest in New England, generally between 3½ and 6 cents per ton-mile; about a third or a half higher in the West; and still higher in the South. Naturally there were great variations in the rates charged on different classes of commodities. The bulky, less valuable products were carried at much lower rates than other commodities in order to secure the traffic, according to the principle of charging what the traffic would bear. There was, however, considerable discussion as to this principle, some believing that high rates, even though they limited the volume of traffic, were better for the railroad. When experience revealed how much traffic in some commodities could be developed by lowering rates, a more general acceptance of this policy was obtained. Thus, during the fifties rates apparently declined, and many products were carried long distances at from 2 to 3 cents per ton-mile. It is interesting to note, however, that by this decade competition between the railroads in some sections had been carried to the point where some of the rates were considered unprofitable, and we find a few attempts to arrive at an agreement to maintain rates.

In the early days passenger traffic was the chief source of revenue of most railroads. Throughout this period it continued to be a much more important contributor to railroad earnings than it is nowadays, when it makes up only about one-tenth of the operating revenue of the railroads as a whole. In fact, there were instances, as in the case of certain railroads paralleling the Erie Canal, where in order to protect canal earnings the state did not allow the roads to carry freight or else required them to pay a toll equal to the canal toll on such freight as they were permitted to carry. In time these restrictions were modified and in 1851, with the abolition of the toll charge, the railroad was left free to compete with the waterway. Somewhat similar restrictions to protect canals appeared elsewhere, notably in Pennsylvania, where the railroad in 1857 purchased the main canal system to eliminate them.

The railroads at once succeeded in taking away from the water routes the less bulky and more valuable freight or that which required quick transportation. In the regions where no water transportation was available the railroad obtained the bulky freight as well, since transportation over the turnpikes and ordinary dirt roads generally cost from 10 to 20 cents per ton-mile, a rate prohibitive for long-distance shipments. In consequence, as far as bulky traffic was concerned, the railroads at this time served chiefly as feeders to the great channels of water transportation: the Mississippi and Ohio river system, the Great Lakes, the canals, and the ocean; in fact many of the railroads had been constructed with this as their primary objective. For most of such traffic, these waterways afforded a cheaper means of transportation than the railroads, the cost seldom exceeding 1 cent per ton-mile. Thus in 1860, although nine-tenths of the grain received at Chicago came in by rail, practically all the shipments to the East went out by water. Similarly of the through freight traffic between the East and the West in the Northern states, the railroads as compared with the Erie Canal carried a much larger percentage of the total westbound traffic, commonly higher class freight, than of the east-bound traffic, which was typically bulky agricultural products.

Still there were some bulky products moving by rail, cotton and coal being the most important at the start. For upland cotton the railroad was the only practicable means of transportation to the seaboard, and only just before 1860 was any considerable amount of that used in the New England factories shipped all the way by rail. The output of coal in Pennsylvania rose rapidly and the railroads secured a steadily increasing proportion of that traffic. Thus as early as 1847 the Reading became known as the great freight road of the country and its annual tonnage exceeded that on the Erie Canal system. The volume of traffic enabled it to carry this freight at even lower rates than were possible on the canal. Such results, showing the possibilities of the railroad as a competitor of

the waterways, put a final quietus, if that were needed, upon the agitation for more canals and impelled the railroads to reduce rates so as to develop new traffic as well as to compete with the waterways. Though the chief successes in this competition were not secured until a later period, the railroads were making steady progress during the fifties in securing more and more of the bulkier freight.

Other Transportation Facilities. In addition to the railroads mention should be made of a few other, though relatively unimportant, improvements in transportation facilities. With the rapid growth in the size of cities better means for local transportation were essential. Omnibus lines were introduced in New York in 1830; in 1852 the first horse streetcar line appeared in the same city. This met with such instant success that it was at once copied in most of the other large cities. In 1839 William Harndon established an express business from Boston to various points and the following year the Adams Express Company began business. The venture was so successful that the service was soon extended to the West and South and also to England. Numerous other companies sprang up and in the fifties a movement toward consolidation started that made possible a better service. The transportation of packages and valuables was the chief function of the companies.

Finally, as travel to the Far West increased after the gold discoveries, stagecoach lines sprang up to meet the need. In 1849 a regular line from Independence, Mo., to Santa Fe was started; by 1860 there were three stage lines, one from New Orleans and two from Missouri, running through to the Pacific coast carrying passengers and mail. The Overland Mail, started in 1858, made the trip from St. Louis to San Francisco by way of El Paso and Fort Yuma in less than 25 days, a distance of nearly 2,800 miles. In 1860 a still speedier service for letters was supplied through the Pony Express which, by relays of horseback riders from St. Joseph, Mo., to San Francisco, Calif., made the distance in less than 10 days. The charge at the start was \$5 a letter. As usual on such occasions a great celebration marked the beginning of this service. Better transportation to the Northwest was provided in 1859 when the American Fur Company started to run a steamboat up the Missouri River to Fort Benton. In the Far West, however, transportation facilities provided for little besides passengers, valuables, and the mail.

Improvements in Facilities for Communication. All the developments in securing better transportation were, of course, of the greatest importance in introducing cheaper and quicker means of communication; but there were numerous other attending developments that deserve attention. One of the most important was the extension and cheapening of the post-office service. By 1860 there were over 28,000 post offices and over 260,000 miles of post roads. Though less than a third of the service,

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measured in miles traveled by the mails, was carried on the railroads, it is notable that the miles traveled totaled 86,000,000, more than 100 times the distance traveled in 1791. In spite of much lower postal rates, the gross receipts of the post office were 27 cents per capita, or 27 times the figure for 1791.

In other respects improvements in the service came rather slowly, chiefly because of the fear of a deficit. Up to 1842 the letter rates on a single sheet were from 6 cents for distances under 30 miles to 25 cents for distances over 400 miles. What this meant can be judged from the statement that a letter weighing one ounce which today can be sent to the Philippines for 3 cents would have cost \$1 in postage to send from New York to Buffalo at that time. Moreover, many of the rates were fixed at fractions of a cent— $12\frac{1}{2}$ or $18\frac{3}{4}$ cents—for which the old fractional Spanish currency was needed in order to make exact change. This proved very inconvenient. The letter rates were so high that numerous devices were employed to evade them, and many private individuals undertook to carry letters in spite of the efforts of the Post Office to stop the practice as being illegal.

As a result of the continued public demands, rates were reduced in 1845 to 5 cents per half ounce for letters carried less than 300 miles and 10 cents for greater distances; local letters paid 2 cents. At the same time certain individual postmasters began to supply stamps or stamped envelopes; this was stopped in 1847 when the government first undertook to supply this convenience. The collection of the postage fee from the recipient of a letter was still permitted until prepayment was made compulsory in 1855. The reduced rates resulted in a heavy deficit the first year. Soon the use of the mails so increased as to yield a surplus and in 1851 a further reduction in rates was made to 3 cents per half ounce under 300 miles. In the meantime some progress had been made in providing lower rates for newspapers and other printed matter, though the papers still complained that the rates and service restricted their circulation. In 1855 registration of letters was provided for and in 1858 the first letter box for the collection of letters was installed in New York. It was not until 1863, however, that local collection and free delivery were commenced, starting in about 50 of the large cities.

Another important advance in communicating facilities came with the introduction of the telegraph, perfected by S. F. B. Morse. A government appropriation made possible the construction of a line from Baltimore to Washington, opened in 1844. When further aid by the government was refused, for fear that the device would not prove financially successful, private initiative took it up and soon lines were being built in all directions. By 1850 connections had been made with the larger cities of the West and in October, 1861, aided by a government subsidy, a line had

been constructed to the Pacific coast, thus ending the brief career of the Pony Express. Meanwhile, in 1858, the first trans-Atlantic cable had been completed, and the nation again enthusiastically celebrated another great achievement of science. But the rejoicing proved premature, for the cable soon ceased to work, and it was not until 1866 that it was successfully relaid.

The Development of Printing and the Newspaper. While cheaper and speedier facilities for communication were thus being introduced, developments of even greater import were taking place in the fields of printing and publishing. Here as elsewhere the progress of science and invention paved the way. A machine for the manufacture of paper in place of the slow hand process was introduced in Europe in 1803 and greatly cheapened paper. Rags continued to be used as the chief raw material; the much cheaper wood pulp was not generally used until after the Civil War, when the demand for paper had so increased that the supply of rags was insufficient. It was not until the thirties that paper-making machines began to be generally employed in this country; but soon these machines were converting pulp into paper in a very few hours, whereas the old hand method had required a week. The direct cost of manufacture was reduced to about one-eighth of that under the old method. Constant improvements were being made in the printing press as well, in this country especially under Robert Hoe and Company, who in 1846 brought out their revolving press, a notable achievement in increasing output. After about 1835 steam power began to be used. The lowered costs of printing thus made possible gave a remarkable impetus to the publishing of books, pamphlets, newspapers, and magazines of all types.

Up to the thirties the growth of newspapers, though fairly rapid, had not brought great changes in their general character. There were about 850 newspapers and periodicals published in the country in 1828 with a total annual issue of some 68 million copies. Only the large cities had daily papers, which commonly sold for 6 cents a copy to regular subscribers only. Although the newspaper press in general was dominated by politicians and was chiefly concerned with political and party issues, there had already appeared some papers devoted to special interests. What has been called the first regular legitimate commercial paper in the country—the *Boston Prices Current and Marine Intelligence, Commercial and Mercantile*—was started in 1795. Its title indicates the character of its contents, but it soon became a general newspaper and it was not until the twenties that papers of this purely commercial type began to appear elsewhere. Meanwhile, starting with the *United States Gazette* of Philadelphia in 1806, the general papers began to introduce a somewhat greater amount of commercial news into their columns. The first real farmer's paper, the *American Farmer*, was started at Baltimore in 1819. Others

soon followed and performed an important function in spreading a knowledge of better agricultural methods. About the same time religious papers began to appear. In 1828 the first paper devoted to the interests of labor was published.

The thirties, which witnessed the advent of the penny paper, brought a marked transformation in the character of the daily press. The first successful penny paper was the *New York Sun*, started in 1833. Within three years it attained a daily circulation of 27,000 copies, considerably greater than the total circulation of eleven other New York papers selling at 6 cents a copy. Soon similar penny papers sprang up in other cities and news became available for the masses. As circulation rose the great possibilities for advertising thus afforded were better appreciated, and the resulting increase in revenue from this source led the publishers to put greater efforts into increasing circulation for the sake of the greater advertising.

All this necessitated an appeal to larger groups of readers; politics was subordinated to giving the news; and, though the news which began to be published by the *New York Herald*, started in 1835, was then regarded just as "yellow" journalism is today, it met with popular support. When Horace Greeley founded the *New York Tribune* in 1841, it took its stand, as did most of these popular penny papers, as an ardent supporter of democracy. Later it became the great antislavery journal with an influence such, it was afterwards said, that during those years the *Tribune* was "the greatest educational factor, economically and morally, this country has ever known."

Whereas the newspaper is chiefly important as helping to further social progress in general, its function in industrial society is great. Through its advertising columns as well as those devoted to news and editorials, it spreads the knowledge of facts that are essential to efficient business operations and helps, if it so chooses, to formulate a more intelligent opinion on public issues of an economic character—a matter of the most vital importance in a democracy.

The rapid expansion of the daily newspaper increased the total number in the country to nearly 400 by 1860, at which date there were also nearly 3,000 weeklies; other periodicals brought the whole number to over 4,000. It was estimated that in a year the total copies of these publications issued was over 900 million. The printing of books was stimulated in the same way, and the foundation of some of the largest publishing houses of today goes back to the decade of the thirties or forties.

CHAPTER XX

AGRICULTURE AND OTHER EXTRACTIVE INDUSTRIES, 1815-1860

Introduction. It has been previously pointed out that in a new and undeveloped country the extractive industries, especially agriculture, are likely to prove the chief lines of economic activity and the basis for the country's industry and commerce. That such was the case in the colonial period has already been shown. In the period now under consideration this still held true for, after all, the economic development of the greater portion of the country's area did not really begin until this period. Our political boundaries were still being rapidly extended and adding new resources to the vast amount still undeveloped, and the growing population was busily engaged in spreading out over and opening up this untouched wealth. Obviously these developments tended to prolong the period during which the extractive industries were so dominant, even though in the older more developed Northeast manufacturing was gaining relatively. The Mississippi Valley is one of the largest and richest agricultural areas in the world and its development during this period naturally helped to emphasize the predominant importance of agriculture among the extractive industries.

Though the other extractive industries could not begin to compare in importance with farming there was a relative gain in mining, for science and invention were showing new uses and creating new demands for mineral products, particularly iron and coal. The discovery of gold in the newly acquired territories greatly increased the output of that valuable product. The fact that that portion of the Middle West east of the prairie lands was covered with forests made possible an expansion of the lumbering industry into that section, though the timber resources of the East had not yet been very seriously depleted. At the same time the acquisition of territory beyond the Mississippi provided a region where the supply of fur-bearing animals made possible a continuation of the fur trade after these animals had been almost exterminated in the East.

Progress in Technological Methods in Agriculture. The rapid expansion of agriculture during this period was a product of numerous factors in the general development of the country. Among the most prominent were the rapid growth of population, the spread of this population over the rich agricultural region west of the Appalachians, and the introduction of better transportation facilities which made it economically worth while

to produce crops in excess of the farmer's needs to be sold in distant markets. These developments have already been described. It remains to give some account of the improvements in technological methods which also contributed to the growth of agriculture.

This is a period particularly notable for the numerous and revolutionary improvements made in agricultural implements and machinery. The plow and the harrow were greatly improved; machinery was soon devised for other forms of work such as had been performed almost entirely by hand previous to about 1830. Drills and seed sowers, cultivators, mowers, reapers, horse rakes, and threshers came in rapid succession and were constantly being improved upon, so that by the decade ending in 1860 American farm machinery may be said to have led the world. In a country where labor was relatively scarce and land abundant these labor-saving devices were of the utmost importance—a fact no doubt largely responsible for turning American ingenuity to their development. They made it possible for the farmer to raise much larger crops and lessened the danger of loss at harvesttime by increasing the speed with which the crops were gathered; to say nothing of the very considerable reduction secured in the costs of production.

Another advance came through the increased attention given to improving the breeds of livestock, especially after about 1830 and following the developments that had been started in England in the latter part of the eighteenth century. This resulted in much greater care being given to livestock than formerly, in more attention being given to choosing those used for breeding purposes, and in an extensive importation of the best stock from abroad. The importation of English Shorthorns, Devons, and Herefords resulted in increasing the amount and improving the quality of the beef obtained; at the same time it reduced the period necessary for the cattle to reach maturity. The Ayrshires, Guernseys, and Jerseys improved the quality of those that were kept primarily for dairy purposes. In the case of horses more attention was given to speed and the development of trotters and pacers; for general utility purposes the Morgan breed developed in Vermont proved admirably adapted. The development of heavy draft horses aided by the importation of such breeds as the Percheron occurred somewhat later. The sheep of the country had been kept chiefly for their wool rather than for their mutton and the importation of the fine-wooled Spanish merinos during the Napoleonic wars had greatly improved this breed. At a later date the importation of various English breeds better fitted for producing mutton and lamb marked another advance. In the case of hogs the introduction of such breeds as the Suffolk, Essex, Berkshire, and China wrought a great change in the native stock with its light weight, long legs, and razor back, better fitted, as was said, for subsoiling than for filling the pork barrel.

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Besides the improvements in livestock were those in fruits and vegetables. The Baldwin, Northern Spy, Jonathan, and Wealthy apples, the Concord grape, the Early Rose potato were developed, and selection of seed began to attract attention.

This period was also marked by some improvements in the methods of farming. The investigations of Liebig and others provided a better understanding of the chemistry of the soil and led to more general and intelligent efforts to maintain its fertility. Manure, previously often thrown away or unused, was spread over the fields; artificial fertilizers began to be employed—cotton seed in the South. The use of root crops and a better system of rotation not only helped to keep up the fertility but obviated the necessity of letting the ground lie fallow. Nonetheless, it must be admitted that the methods and problems of soil conservation received little attention from most farmers. Land was cheap and new land easily obtained so there was little inducement to employ economy in its use. To European eyes American methods appeared extremely wasteful, often nothing short of land butchery.

A final factor of aid in the improvement of agriculture was the development of various facilities for the investigation of its problems and spreading abroad a knowledge of better methods. It might be expected that, in any progressive country where agriculture was so predominantly important an economic activity as it was here, the people through state or other group action would have bent every energy toward furthering its development. Yet, in fact, surprisingly little was done.

To understand this—as well as many other problems of the farmer—one must remember that farming is typically carried on by small-scale economic units widely scattered and very much isolated. In this country they are much more isolated than in Europe. These conditions tend to develop in the farmer an individualistic spirit, as well as an attitude of conservatism in his methods, and make it difficult for him to keep in touch with the world's progress. The small scale of his enterprise and his lack of capital combine to check experimentation on the part of the individual farmer and united group action for such ends is difficult to obtain. The use of scientific principles and sound business methods is just as important in agriculture as in other lines of business, but the conditions surrounding farm life have made it difficult to secure the action requisite for introducing such principles and methods among our farmers; it is only in very recent years that rapid progress in these lines has been made. However, there was some advance in this earlier period.

Shortly after the Revolution a number of agricultural societies were organized that took an interest in various improvements and the spread of knowledge concerning them. The rapid development of county and state agricultural fairs helped to bring the farmers together, gave them an

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opportunity to see and buy the best livestock and the newest implements and, through the award of prizes, offered an incentive to improve their various farm products, as well as the household products of the farmer's wife. Similarly the growth of farmers' newspapers and journals after 1820 helped to spread information about better methods and the problems of agriculture in general. As far as instruction in the educational institutions of the country was concerned, agriculture was almost ignored. There are a few instances where this subject was taught in the schools after 1821, and some academies and colleges offered a little instruction. It was not until 1857 that the first agricultural college in the country was started in Michigan.

The states did almost nothing to further progress and the attitude of the Federal government is best indicated by the fact that it was not until 1862 that a separate Department of Agriculture was organized. Such activity as existed theretofore had been carried on under the charge of the Commissioner of Patents. This official in 1836 had asked our consuls to send him seeds of foreign plants that might advantageously be introduced in this country, and in 1839 Congress initiated the practice of free distribution of seeds by appropriating \$1,000 for that purpose.

The Economic Organization of Farming. It has been previously pointed out that in a country where land is relatively cheap and labor and capital dear the farmer will, as far as possible, try to economize on the use of the scarce factors of production and employ relatively small amounts of labor and capital on a given tract of land. These were the conditions that had existed in colonial times; they remained substantially unaltered during this period and resulted in a continuance of extensive methods of agriculture. In the neighborhood of the large cities, however, the rise in land values led to more intensive methods of cultivation chiefly in the form of market gardening.

Land being cheap and easily obtainable, most farmers owned their land. Although no statistics are available, it is improbable that the number of tenant farmers was large, though tenants were doubtless more common in the Southern plantation holdings. Rent was commonly paid in a portion of the crop, usually between one- and two-thirds, varying with the amount of supplies furnished by the owner. Most tenants, however, were not content to remain in that position long and did so only until they had accumulated enough to buy a farm of their own.

The problem of his labor supply was always a serious one for the farmer. Few men were willing to hire themselves out as farm laborers for constant and permanent employment especially when, if the work appealed to them, they could so easily get a farm of their own and be independent. Probably the great portion of the hired labor available was made up of men in the older sections of the country who for some reason,

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such as local family ties, lack of money, or mere inertia, found it difficult to go West, or those who, at the seasons of greatest demand, such as harvesting, were willing to give up their usual occupation for the sake of the temporarily high wages obtainable. In consequence most farms were limited in size to tracts such as the labor available in a single family could cultivate. Only in the South, where certain crops were of such a character that Negro slave labor could be employed, was this limitation overcome. The important effects of that "peculiar institution" upon Southern agriculture and development will be described separately.

The scarcity of capital and the lack of good facilities for borrowing, though presenting an obstacle for the farmer, were a less serious one in this period than they would be today. The cheapness of land lessened the amount that had to be invested in the farm, and the relatively few and inexpensive farm implements generally used decreased the necessary outlay for such items. For such borrowing as he found necessary the farmer generally had to depend upon the loans obtainable in his immediate locality either from banks or private individuals. A mortgage on his land or chattels was usually the only security he had to offer and, in the undeveloped state of the farm mortgage business, there was little market for such investments at any great distance from the farm. The scarcity of such local capital in the newly developing West was in no small measure responsible for the demand for cheap money and much of the reckless banking that, as we shall later see, developed in that region. In the South the heavy investments of the large plantation owners in land and slaves resulted in many of them going deeply into debt, just as in colonial times; this practice became widespread among the smaller cotton growers as well. Here the system of mortgaging the crop in advance became common and tended to compel the growing of cotton, which was the chief cash crop, and to create serious financial trouble if the crop proved unprofitable.

In addition to the conditions determining the supply and cost of the chief agents of production the economic organization of agriculture was also shaped by the available markets for the farmer's crops. The great improvements in transportation facilities combined with the growth of population and the opening up of foreign markets resulted in such an expansion of the markets for the products of many regions as to transform completely the economic organization of agriculture. In consequence, during this period agriculture became much more commercial in character than it had been theretofore; that is, a much larger proportion of the farmer's products was raised for sale in the markets. This meant that it was possible for him to specialize in the particular crops for which his land was best fitted; it tended to emphasize the one-crop system of cultivation and at the same time resulted in his producing fewer things to

supply the varied family needs and in his buying more things produced elsewhere.

In short the farmer's family became less self-sufficing economically; and the farmer, instead of being a Jack-of-all-trades more or less engaged in hunting, lumbering, and manufacturing, as in colonial days, tended to give more and more of his time to farming and to concentrate on a few main crops. Although this was the dominant tendency, it must be emphasized that the change took place slowly and that conditions varied greatly as between different crops and different sections of the country and in a given section as between different periods. Some of these differences and the main results achieved will be described subsequently in the general account of agricultural development.

One result, however, may be pointed out here—the effect of this development upon the economic risks confronting the farmer. The more a farmer specializes in one crop, the greater his financial loss if that crop proves a failure or if for any reason the market price is so low as to result in a loss or little profit. It is true these risks that the farmer faces are seldom so great as those that confront a laborer in a period of widespread unemployment when he may find himself without any means of earning even his daily bread, or of a manufacturer dependent upon the sale of some specialized product the market for which has disappeared. As the majority of farmers at least own their land and home and produce some, often a considerable portion, of their food, they can ordinarily be fairly sure of the vital necessities no matter what the market for their crop. Nonetheless, a poor market for their staple cash crop does involve considerable suffering; for those whose property is mortgaged, it may even result in loss of their home.

Consequently in a region and period when such losses are common it gives rise to widespread discontent among the farmers. This fact is an important one in understanding both our economic and our political history. For this reason a knowledge of the general fluctuations in market prices for the great agricultural staples during this period is essential. (See the chart on page 473 and also the frontispiece.)

The Napoleonic wars and the War of 1812 had brought a very rapid rise in prices. When peace returned prices of farm products, though well sustained till 1817, dropped precipitately thereafter and resulted in a panic in 1818–1819 and nearly a decade of rather low prices for many agricultural staples followed. There followed a decade of advancing prices marked by great speculation in Western lands and culminating in the panic of 1837. The reaction and depression that succeeded were characterized by abnormally low prices for most of the great agricultural staples. In fact there was probably no period in the century when the market conditions for them were so bad as they were in the early forties, unless

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it was in the middle nineties. After about 1845, however, various factors contributed to bring about a marked improvement: the repeal of the corn laws opened up the British markets; the Crimean War soon augmented the European demand; and the increased supply of gold from California and Australia stimulated the general rise in prices. Thus for something over a decade preceding 1860 the farmer was basking in the sun of prosperity, agriculture flourished, and a spirit of contentment and optimism pervaded the agrarian population.

One other reaction of the development of commercial farming upon the point of view of the farmer may be noted at this point. The price of the farmer's staples is fixed in the general market but the price that he obtains on his farm is reduced by the costs of transporting the products to market and the charges of such middlemen as may handle the crop. As most of these products are bulky in proportion to their value, the costs of transportation, especially if such facilities are poor, will be large in proportion to the market value of the product; so the farmer will be paid on the farm considerably less than the price in the central market. Hence comes the farmer's great interest in the costs of transportation and hence during this period his vigorous demand for internal improvements, especially railroads. From his point of view there could not be too many railroads, for any railroad, no matter what its rates, was cheaper than the available methods of overland transportation. After the railroads had been obtained and a later generation had grown up that had forgotten the conditions before railroads existed, the farmer's attitude toward them showed a marked change, as will appear in the account of the later period.

Somewhat the same situation existed in regard to the farmer's attitude toward the middleman and his charges. Though the middleman's services were perhaps never so enthusiastically welcomed as those of the railroad, yet in this period, when these services were generally provided by small individual dealers or partnerships, the farmer felt that he was in a less unfavorable position for bargaining for the sale of his crops than is the case today. It is in the succeeding period that these changes in the farmer's economic position with the steady tendency toward commercial agriculture assume their greatest importance in helping to understand the attitude of the agricultural class on various economic and political issues.

Having surveyed the chief factors that determined the development of agriculture during this period, we can now turn to an account of the growth that resulted; describing (1) the progress in each of the chief sections and (2) certain results for the country as a whole. However, the lack of adequate census reports before 1840 makes anything but general statements for the earlier years impossible.

The Progress of Agriculture in the North and the West. Although general farming continued to prevail in New England there was some

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tendency to give increased attention to dairying and market gardening to supply the needs of the growing urban population. The raising of horses remained and, chiefly in Vermont, the raising of merino sheep primarily for their wool; after 1840, however, the sheep flocks of New England rapidly dwindled. Of the leading grains this section produced comparatively little, oats followed by corn being the most important relatively. Wheat had never been extensively grown and after 1840 the ravages of an insect pest further discouraged its production. In these crops as well as in the case of pork and beef, New England suffered from the growing competition of the cheaper and richer lands of the West, particularly after about 1840 when these Western products began to be brought to the East in ever increasing volume. From that period the progress of New England agriculture was slow. Many farmers or farmers' sons migrated to the West or sought another pursuit in the cities; those that remained who were not contented with devoting their efforts to supplying the family needs with a small surplus for the local market to get cash, were forced to turn to dairying or, near the cities, to market gardening, to obtain products where Western competition was less severely felt.

In the middle states, whereas somewhat similar tendencies were in evidence, the growth was more marked and wheat continued to be an important part of the farmer's crops. The opening up of the fertile Genesee Valley in western New York made available a new source of supply. As late a census as that of 1850 showed that Pennsylvania grew more wheat than any other state, though the preceding census had shown Ohio temporarily in the lead. Relative to the population the crops of oats and rye were larger than in any other group in 1860 and the per capita crop of barley was second only to that on the Pacific coast. Among live-stock beef cattle and swine received slight attention. Sheep were fairly common in New York and parts of Pennsylvania, but after about 1840 they rapidly declined in number. The small number of Saxony sheep in the southwestern part of Pennsylvania produced the finest wool grown in the country. Dairying on the other hand suddenly rose in importance, and in 1860 New York produced almost twice as much butter and more than twice as much cheese as any other state in the Union, and Pennsylvania was second in butter production. The introduction of the cheese factory in New York in the fifties contributed to increase the output of that product and marked another step in the transfer of certain activities away from the farm. In these states, too, orchard products and in New York the cultivation of hops and grapes received more attention than elsewhere.

In the group of states west of the Alleghenies and north of the Ohio or Missouri the great staple products were wheat, corn, hogs, and cattle. Although, from almost the beginning, these were the center of the farmer's

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attention, unless he was so located that he could get such products to market considerable diversification of crops became necessary. Just as in the East in colonial times, the pioneers and earlier settlers found it necessary to engage in many other activities as well, such as lumbering, hunting, and the manufacture of numerous household products. Even at a later date, when such outside activities ceased to be necessary for most, we may assume that the ordinary farmer kept cows and poultry, raised garden vegetables and fruit sufficient to supply at least the family needs, and often had some surplus to sell in the neighboring town or city, where such was accessible. As new settlers poured in and increased the density of population and as better transportation and marketing facilities became available, the tendency to concentrate attention on the great staples, particularly in the later settled sections, became more marked. This is best shown by the facts that in 1860 the wheat crop in each of four of the states in this region exceeded that of Pennsylvania, whereas the per capita crops of wheat and corn in this general group were almost twice those for the whole country and several times those for the New England or middle states. Though the per capita figure for cattle, other than milk cows or working oxen, was a trifle below that for the whole country and the figure for swine only about 50 per cent greater than that for the country, both, though lower than in the South, were much greater than the figures for New England or the Middle Atlantic states. It is thus evident that in the decade or two before 1860 the people of the North Atlantic states were becoming increasingly dependent on the states to the west for wheat, pork products, and beef, the corn, of course, being mainly used in the West to feed the stock.

Without this growing Eastern market any such specialization and expansion in these staple crops would have been impossible. Though there was some market abroad, chiefly after 1845, and also in the South, the Eastern market, at least after about 1845, became much more important than either. In fact, there was a period in the first half of the forties when, judging from the prevailing prices for these Western staples, it seemed as though there were no markets anywhere sufficient to absorb the rapidly increasing output at a remunerative price. In these years the prices that the farmer received for these staples fell to one-half or one-third of what he had been getting in the thirties; wheat was selling around 50 cents a bushel, corn around 12 cents, butter at 5 cents a pound, and pork or beef were to be had around 3 cents a pound. It is even stated that steamboats on the Mississippi used bacon for fuel.

Doubtless the chief cause for this general drop in prices is to be found in the monetary and banking conditions and the general reaction that followed the speculative boom of the thirties and the panic of 1837. In the long run, once adequate transportation facilities were available, the

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Western farmers would have secured much of the Eastern market, even had it remained stationary in size, since they could undersell the Eastern products because of their advantage in relative costs of production. Nonetheless, conditions were such that for the moment the farmers of this section hesitated and began to talk of turning to other products and more diversified farming. After about 1845 the situation began to improve, farm products benefited by the general rise in prices that started at that time and became marked in the fifties, and the advance in the prices of Western staples was hastened by the introduction of railroads, the growth of the Eastern demand, and that of Europe. Thus the farmer's attitude toward the old staples became more favorable and the rapid increase in their output continued.

However, this period of temporary depression was not without some effect on farming and, combined with other factors of greater importance, tended to increase the attention given to products other than the great staples—at least in some sections. In Ohio there was always a more diversified farming than in the states farther west, owing in part to the fact that in the early period it was necessary; later the more rapid growth of urban population, the decreased fertility of the soil, and the opening up of the new prairie lands still better fitted for raising corn made diversification more desirable. In this state sheep were an important element among the livestock. In 1840, Ohio had more sheep than any other state but New York and, from 1850 until the rise of the range industry in the Far West, it was the chief wool-growing state of the country. The raising of sheep was one of the things to which the farmers in this whole group of states turned in the depression of the forties; but outside of Ohio and southern Michigan this interest was soon lost. Dairying, on the other hand, received more and more attention. In 1860 Ohio was third among all the states in the production of butter and Illinois fourth. At the same time Ohio produced almost one-quarter of the country's cheese and New York nearly a half. By this date also, oats, hay, and orchard crops were products of some importance in the states east of the Mississippi. In Ohio, tobacco and grapes could be added to this list.

The sudden growth of population on the Pacific coast, chiefly in California, after 1850 created a local demand for farm products and led to a development of agriculture, (1) to supply local needs and (2) for export. This furnished a more stable basis for the growth of this region than the uncertainties of gold mining. Wheat, barley, cattle, and wool were the chief products sent out of this section, mostly from California, but the amounts were small. As far as the vast region intervening between the coast settlements and those on the prairie frontier is concerned, it played no real part in the country's agriculture. The small scattered settlements that existed supplied their own needs as far as possible but

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nothing more, except for a little wool or a small herd of cattle occasionally sent out from the region of New Mexico.

Southern Agriculture. If we turn to the group of slaveholding states that made up what may be called the South during this period, we find a more complex situation in its agriculture and one of unusual interest, as affording some opportunity to study the institution of slavery. It was the enormous expansion of cotton growing that revived Southern slavery—for the rice and sugar plantations were relatively insignificant; it is therefore in the cotton belt that one must study its effects upon agriculture. Considerable sections of the South grew little or no cotton and had, in consequence, a very different type of agriculture. These sections thus necessitate a separate description, following which we will turn to the cotton belt and its adjoining rice and sugar plantations.

First of all, there was the mountainous region of the Appalachians stretching from Maryland to Georgia. The Southern mountaineers living there were practically self-sufficing families; the economic developments that so altered conditions in the rest of the country swept around them unnoticed leaving them the most backward, unprogressive group of farmers in the country, securing a meager living from their little hill farms just as they had in the days of the colonial pioneers. Below this region in the Piedmont was a section extending to South Carolina and given over to moderate-sized farms that raised a variety of products, but especially wheat, corn, and livestock.

Still farther eastward in Maryland and Virginia—in later years in North Carolina as well—came the tobacco-growing farms and plantations. Here slaves were found in much greater number. Whether slave labor was really profitable on the tobacco plantations was beginning to be questioned even before the Revolution, for it was seen then that, as the fertility of the land declined and more intensive and careful methods of cultivation became necessary, the labor of Negro slaves was less economical. However, as the demand for slaves from the cotton belt increased and their price rose, a counteracting factor appeared in the increased profits from the sale of those born into slavery. This, combined with other factors that will be noted in connection with slavery in the cotton belt, resulted in the continuance of slavery in this region; however, in Maryland the number of slaves declined after 1810 and in Virginia remained about the same after 1830. Whereas the growing of tobacco in this section appears to have remained almost stationary up to the latter forties, the higher prices in the following decade resulted in a doubling of the crop. Though specializing in tobacco this region also raised corn, hogs, and such other products for its own needs as could be grown there.

West of the mountains were the border states of Kentucky and Missouri growing practically no cotton but holding a considerable number

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of slaves. Just south of them Tennessee and Arkansas, though having some sections devoted to cotton, for the most part followed lines of farming similar to those in the border states. Kentucky raised a great variety of products but became noted for the breeding of livestock, particularly horses, for leading all states in the production of hemp and flax, and for developing a new center for the growing of tobacco which before long rivaled Virginia in its output, so that this crop together with the tobacco crops of the adjoining states came to exceed that of the South Atlantic states by 1860. Though less preeminent in these specialties, Tennessee and Missouri were also engaged in raising them along with the more common staples of this region. Slaves were much less numerous in these states than in the lower South.

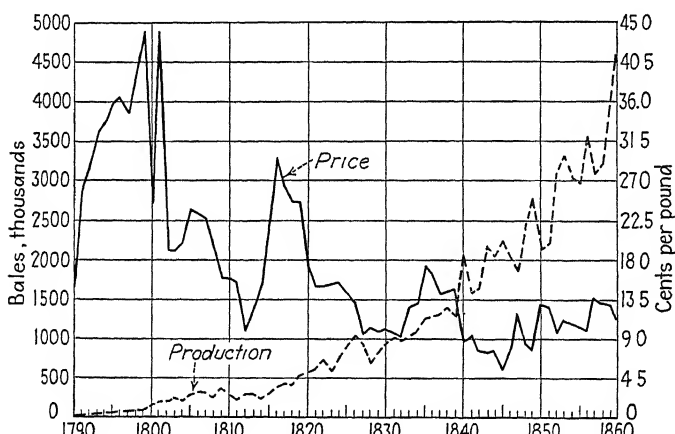


FIG. 18.—Production and New York price of cotton, 1790-1860.

The Agriculture of the Cotton Belt. In the states farther south the dominating feature in their agricultural development was the growth and westward extension of cotton growing. In 1820 the cotton crop of the country was about 160,000,000 pounds. From then, in every decade up to 1860, with the single exception of that of abnormally low prices in the forties when the increase was less than one-quarter, the crop was more than doubled; in the thirties it was almost trebled. By 1860 the cotton crop was over 2,200,000,000 pounds. Whereas the crop of the states bordering on the Atlantic coast steadily increased, that of the states to their west increased much more rapidly; this latter group, though growing barely one-third of the total crop in 1820, outstripped the Atlantic states before 1830 and finally was growing three-quarters of the country's total output.

Though upland cotton became the overwhelmingly predominant staple of these states, there were a few small sections along the seaboard

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that specialized in other crops. The long-staple sea-island cotton continued to be grown in the sections suited for it along the coast. In South

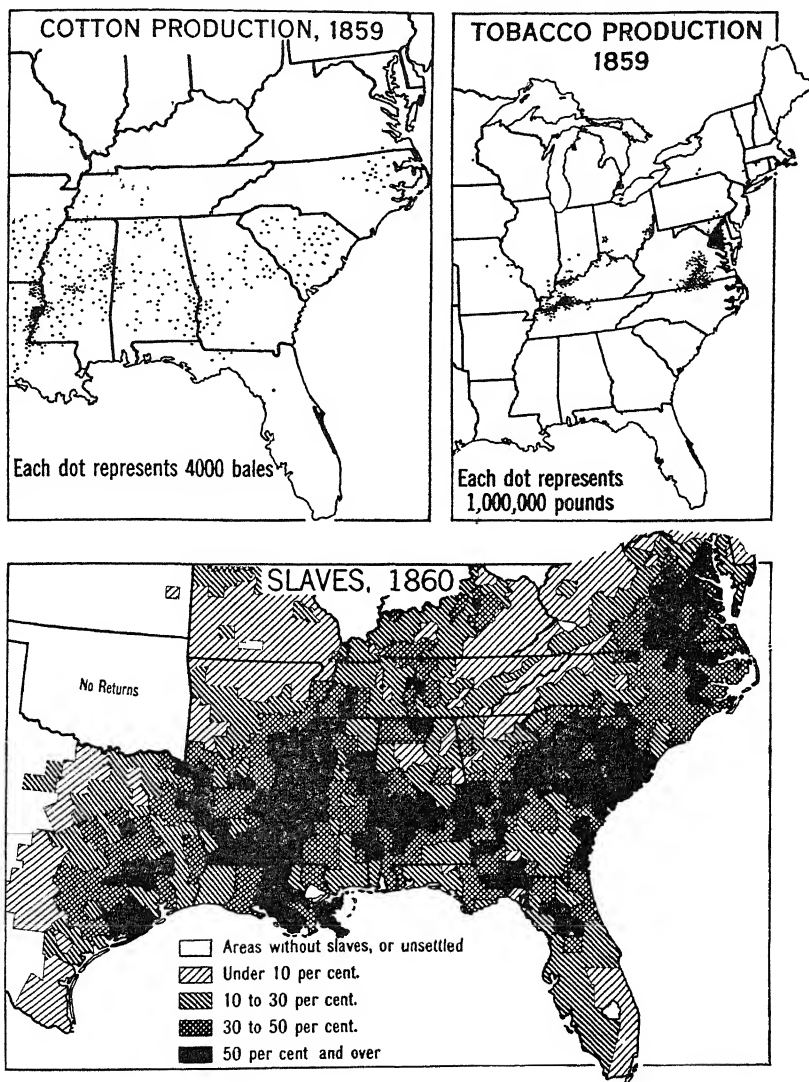


FIG. 19.—Cotton and tobacco production and slaves, 1859–1860. (Reproduced from C. O. Paullin, "Atlas of the Historical Geography of the United States," New York, 1932, by permission of the American Geographical Society of New York.)

Carolina and Georgia rice plantations were maintained though there does not appear to have been any marked increase in their crop; the cultivation of indigo, so artificially stimulated in colonial times, was abandoned.

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The most marked change, however, was the rapid rise of the cane sugar industry, though this was practically confined to Louisiana. The advance of this industry was fluctuating, since it was affected by tariff duties and the alternative profits of cotton growing; it reached its height for this period in the early fifties with an output of 450,000 hogsheads, besides the by-product of molasses. Its growth was important as providing in part a domestic source of supply for a product almost entirely imported theretofore; the output furnished around one-half of the country's consumption by 1830. All three of these minor staples, sea-island cotton, rice, and cane sugar, depended more upon slave labor than did upland cotton.

Though the agriculture of the cotton-belt states was dominated by these staples in the production of which slave labor was generally employed, this section also raised the greater portion of the food products that were consumed by the population. The amount of cotton that any grower could raise was limited by the supply of labor that he had available for picking the crop, for that process produced the peak of the seasonal demand for labor in raising this crop; an individual was able to pick only about half as much as he could raise. In spite of the fact that the labor of women and children could be used for this work, it meant that there were seasons of the year when the supply of male labor was only partially employed in growing cotton. To prevent this labor from lying idle and to distribute over more crops the overhead charge represented by the capital invested in the slaves and their upkeep, since it was obviously impossible to discharge the slaves, the cotton growers turned to raising other products. Corn was particularly well adapted for this purpose, since the months when it required the most labor were those when cotton required the least; so in many sections it was customary to plant about an equal acreage of corn and cotton, perhaps about 10 acres of each crop for every able-bodied slave. To keep this labor more fully employed and to prevent needless waste of other resources of the farms and plantations, hogs, poultry, and some cattle were generally kept and garden products widely raised. Some wheat was grown in the cooler sections and a few sheep were raised, generally of an inferior grade—a characteristic of much of the Southern livestock.

The result of having these by-products was that the cotton-belt states together with the other Southern states, according to the Census of 1860 (though that may have exaggerated the figures), had a larger supply of corn, peas and beans, and hogs per capita than did the country as a whole. They also had about the same proportion of milk cows, though the per capita butter output was less than half that of the whole country; almost no cheese was produced. In the case of wheat the per capita crop was about one-third below that of the whole country. Bearing in mind the

fact that nearly one-third of the population of this section consisted of Negro slaves whose chief articles of diet were corn and pork products, we may see that the South as a whole must have been able to supply most of its own food consumption. What the cotton belt lacked was generally available in the border states adjoining it. Whereas some supplies were brought in from the Northern states such as wheat, butter, and, for the livestock, hay, it is improbable that they constituted an appreciable proportion of the total consumption.

Economic Aspects of Slavery. We may now turn to inquire why slave labor was used in Southern agriculture and what were the economic effects of its use. The chief advantage of slave labor consisted in the certainty of control over a definite supply of labor and such mobility as resulted from being able to shift it from place to place. There was also at least a possibility that it might cost less than free labor though numerous disadvantages, varying in importance with the purposes for which it was used, lessened this likelihood.

The chief economic disadvantage was its inefficiency owing to the lack of an incentive to do good work, which resulted not only in idling, carelessness, and waste but also in the necessity for constant supervision that added materially to the costs. Another disadvantage arose from the fact that most of this labor was suitable for only a few purposes and could not easily be shifted from one kind of work to another. The original cost of a slave plus the constant outlay for maintenance of the whole family created a heavy overhead or fixed charge against receipts. Some costs, like poor relief, which were often shifted to the community in regions of free labor, were borne by the slave owners.

In other words the economic position of the owner of many slaves was somewhat similar to that of the manufacturer who has a considerable amount of capital invested in a fixed form in his plant and specialized machinery. If the price of his product is high, he prospers; if low, since he cannot withdraw his capital and the fixed charges go on, he will often continue to run the factory, even when he is not getting an adequate return on his investment, because shutting it down may involve still greater loss. The difficulty in adjusting output to market demand, which this involves, results in periods of high profits and heavy losses, and makes the industry very speculative in character. The situation of the big slaveholding planters was very similar; in fact in some respects it was aggravated, partly by the dislike of freeing or selling their slaves even when unprofitable, partly by the fact that the number of slaves owned was a factor in determining the owner's social prestige. Thus considerations other than pecuniary tended to strengthen and perpetuate slavery even where its advantages were questioned. On the other hand, some owners were willing to sell their slaves and got such profit as they could thereby.

Finally, in considering the advantages and disadvantages of Southern slavery it must not be forgotten that the characteristics of the people who were enslaved was an important factor. A race developed in the tropical zone was physically better able to endure the climatic conditions existing in certain sections of the South, notably those devoted to rice and sugar cane, than was the white population. On the other hand, most of these slaves were not many generations removed from a barbaric life in Africa. Civilization is a slow process under the best of conditions and, in the case of these slaves, though progress was made, the process was often rendered difficult rather than easy. They were simple, thoughtless, ignorant, and emotional. These traits only increased the inefficiency which accompanies forced labor of whatever type. Still, the very impotence of the Negro slaves, which also resulted therefrom, made the problem of controlling them easier.

This analysis of the advantages and disadvantages of Negro slave labor will explain why it came to be employed in producing certain of the great staple crops of the South while in the case of other crops it was little used. As cotton was the chief of these staples, we may best examine the conditions attending its cultivation that seemed to make the use of slave labor possible. (1) The work involved was simple and routine in character; there was no machinery and only the simplest tools. (2) The supervision necessary to check idleness and waste was easy to secure because a relatively larger amount of labor was used on a given tract of land than in the case of most crops. (3) The unusually heavy demand for labor at the picking season, compared with that needed for cultivation, could be supplied by the women, the children, and the weaker men of the slave's family. In months when this labor force was not entirely employed in the cotton fields, much of it could be diverted to other purposes where, even if less efficient, it was not totally wasted. (4) Although the routine and extensive methods that were employed tended to exhaust the soil and so to necessitate either a more careful and varied agriculture, for which slave labor was less adapted, or else a resort to new fertile land, this alternative was always available, for the rich alluvial soil of the Mississippi Valley was even more fertile than that of the older cotton-growing states; as late as 1860 the cotton belt had not reached the limit to its expansion. Although other minor points might be listed, these four appear to have been the most significant.

If we turn to other Southern staples where slave labor was largely employed, we find the conditions of cultivation in many respects rather similar. In growing rice and sugar cane, supervision of the labor was easy and, though there were fewer other products where the surplus labor could be employed and little room for expansion, the climatic conditions were such that Negro slaves were much more essential than in most of

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the cotton belt. Doubtless these were the two crops where the use of slave labor was best justified economically. After them came cotton. When it came to tobacco the conditions were less favorable and more serious doubts as to the advantages of slave labor arose. The amount of labor required per acre was very great; but the crop needed unusual care in handling and exhausted the soil very rapidly; and the supply of new land suitable for this crop was comparatively limited. The fact that slaves were less used in Kentucky, where tobacco culture developed much later, would appear to reflect the doubts concerning the advantages of such labor for this crop and suggest that the continuance of slavery in Virginia is to be explained on the grounds previously mentioned.

As for other staple crops, such as wheat, experience showed slave labor uneconomical. The labor required per acre was small, making supervision difficult; and the introduction of machinery further reduced the amount of labor required and increased the need for skill. In Missouri the use of slaves in wheat growing was practically abandoned. Though some were still employed in the best wheat fields of Virginia, this was doubtless chiefly owing to causes other than any advantage in raising wheat. Thus it is clear that the chief economic basis of slavery in the South was the belief that such labor was employed advantageously in raising its great staple—cotton.

Other facts substantiate this conclusion. As the cotton belt expanded the number of slaves increased. In 1790 there were nearly 700,000 slaves in the country including about 40,000 north of Mason and Dixon's line; by 1830 there were over 2 million; by 1860, nearly 4 million. Probably three-quarters of this total was to be found on the cotton-growing farms and plantations. Moreover, the periodic fluctuations in the price of slaves corresponded with the fluctuations in the price of cotton. About 1800 when cotton growing was rapidly increasing, good field hands were selling at from \$400 to \$600 in the older slaveholding states. During the War of 1812 the price fell to around \$100, but quickly rose after 1815, only to drop again in the twenties. The boom of the thirties carried the price to over \$1,000, but this was almost cut in half in the depression of the early forties; the prosperous fifties raised prices to the highest level ever attained, varying from around \$1,200 in Virginia to \$1,800 in Louisiana.

At this time it is said to have been a common rule of thumb that a prime field hand was worth \$100 for every cent of the market price of cotton. Artisans sold for about twice as much as prime field hands of the same age; prime women brought a quarter or a fifth less than prime men; boys and girls entering their teens and men and women entering their fifties sold for about one-half of the price of prime hands of either sex. For the period as a whole the price of slaves tended to rise though the price of cotton tended rather to decline. This was due to the prohibition of

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imports of slaves after 1808—though some were smuggled—combined with the westward extension of cotton growing. This Western demand kept the price of slaves in that section above the level that prevailed in the older slaveholding section and was responsible for the growth of the domestic slave trade. It is estimated that about 220,000 slaves were sold out of Virginia to the Southwest between 1830 and 1860, and that the total domestic trade during the fifties averaged around 80,000 a year with a value of some \$59 million.

Though cotton growing was the basis of slavery, it has been questioned whether the use of slaves in raising this crop was really very generally profitable. In the absence of anything like careful and comprehensive cost-accounting data no certain answer can be given. Prof. Phillips, a most careful student of the subject, has said,

As a matter of fact it was only in special industries, and only in times of special prosperity, that Negro slave labor was of such decided profit as to escape condemnation for its inherent disadvantages.

If this is correct, how can we explain the steady growth of slavery?

The explanation must be found in certain points previously mentioned. (1) In growing cotton with slave labor it was difficult, as has been pointed out, to adjust the output to the market demand; this type of labor could not be easily shifted to other crops and the heavy overhead charges led the planter to continue producing in spite of an unprofitable market. Moreover, the planters were always trying to get more land and more slaves. This lack of adjustability in cotton growing was aggravated by the fact that the growers were often heavily indebted and it became a common practice to give a lien on the future cotton crop to secure these debts. The creditors, knowing there was a better cash market for cotton than for any other crop, opposed any move to shift to other crops and so increased the fixity of the situation. (2) As a result of this characteristic, the industry of growing cotton with slave labor was very speculative and, at times of high prices for cotton, profits were large. In such an industry there is a tendency to develop an overoptimistic attitude; the attention of people is so absorbed by the occasional high profits that no adequate allowance is made for the losses of other periods. The typical illustration is gold mining in the early less scientific days when it is said more money was put into the mines than was ever taken out; the clearest case is the lottery where the buyer of a ticket well knows the chances are against him. In the case of cotton growing this speculative optimism led to an overvaluation of slaves and probably of much cotton land as well, particularly in the fifties, till for most growers the proceeds from their cotton failed to yield a fair return on the value of the property invested. (3) There were the inertia, conservatism, and ignorance, especially the failure

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to make a careful analysis of costs, that are found in every line of business but are particularly in evidence among small farmers. Furthermore, in the case of the larger planters, sometimes owning several plantations and not infrequently absent for considerable periods, overseers were placed in charge who were more apt to be interested in producing good immediate results than in the long run success of the plantation. (4) There were the noneconomic factors: the fear of the consequences of freeing the slaves, among some the dislike of selling them, and the fact that the number of slaves owned might have some bearing, though not necessarily much, upon one's social prestige. All these tended to perpetuate slaveholding even where there was little doubt that economically it was unprofitable.

Whatever the losses or gains derived by the South from the use of slave labor, there were innumerable other ways in which this—"peculiar institution" affected not only the economic development but also the political and social life of this section. In the following brief summary of these effects it should not be forgotten that in most cases Negro slavery was only one of the factors contributing to the results described and not necessarily the most important one, and that some of these results were due to the character of the people enslaved. Otherwise this would give an exaggerated notion of slavery's influence.

General Effects of Slavery, Economic and Social. As far as the general economic development of the South was concerned, Negro slavery in combination with other factors tended to make this a section largely dependent upon the success of a few great staples. Except for most of its food it had to rely upon outside sources for manufactured goods, for shipping, and for a market for its staples. Manual labor being a badge of slavery was looked down upon; skilled labor was scarce; immigrants for various reasons commonly chose to settle elsewhere. Capital was also scarce; such as was available was invested largely in land and slaves. The growth of manufacturing was thus checked and much of the section's commerce with others tended to fall into the hands of outsiders.

The extensive methods of cultivation and the rapid exhaustion of the soil's fertility led to the abandonment and waste of much land. The average size of farms was much greater than in the North—in 1860 four-fifths of all the farms in the country of 500 or more acres in extent were in the South—but the density of population was much lower. The resulting need for new land had its political reaction in the demand for the annexation of Texas and the talk of annexing Cuba. The sparse and scattered population with the absence of many towns and cities greatly increased the difficulties in introducing those institutions and providing those opportunities for social contact that are so essential to progress and civilization. Educational institutions for the masses were notably deficient and lacking.

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*Southern society became highly stratified in character; there were the slaves, the poor whites, and the planters; an appreciable and influential middle class was scarcely to be found. Yet the slaveholding class constituted but a small portion of the white population. The total number of slaveholders in the country in 1860 was under 400,000. Nearly one-third of these held either one or two slaves; over one-third held from three to nine slaves each; and about one-quarter from 10 to 49 slaves. Only some 10,600 people held 50 or more slaves apiece and among these 2,300 owned 100 or more each. It thus appears probable that rather less than one-quarter of the white families of the South held slaves, and only a small group had a large interest in this form of property. But this small group led by the largest holders constituted the ruling class in this section. Economically, socially, and politically they dominated the South.

Of this class in the lower South Prof. Dodd says, "There was never in America a more perfect oligarchy of business men" than this group. Laws were made by the owners of plantations; the higher courts were established by their decrees; governors and members of Congress were chosen in accordance with their wishes; and they were the ruling members of the churches. "Nothing of importance could happen in the lower South without their consent. This fact gave to the South its unity of political purpose and that moderation of social change which men of wealth always prefer. Security of property, loyalty to church, and safety in education were the guarantees of the system."¹ Freedom of discussion concerning slavery was not tolerated so there was little chance that the light of truth would illumine its real effects. An institution that cannot stand the light which only frank, full, and free discussion can provide is a most dangerous one. The South paid a heavy toll for closing that safety valve of free speech upon which orderly progress so depends. This only strengthened the leaders in their conviction that this institution was right, morally as well as economically. This belief became a part of their very religion; justification of slavery was said to be found in the Bible; and two denominational churches of the country were split in twain when the Northern element refused to accept such doctrine. Yet, with our present-day understanding of the factors that mold the beliefs of individuals and the opinions of the public, it is impossible to assert that the convictions of this Southern oligarchy were not real or sincere.

Probably the most important lesson to be learned from our study of slavery is the illustration it provides of the tremendous influence exercised by inherited notions, by habits, by economic interests, and by our whole social environment in shaping our opinions and beliefs. Sometimes it may work for good and at other times for woe; but try as we will—though the South did not try—it is well-nigh impossible altogether to escape this influence and maintain a purely objective and scientific

¹ Dodd, W. E., "The Cotton Kingdom," New Haven, 1921, p. 121.

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attitude. Looking back over the past, we may easily see the power of such influences; the difficult thing is to discern and allow for their effects today. Yet try we must if we would escape such tragic consequences as overwhelmed the South.

General Results of the Expansion of Agriculture. After this survey of the agricultural development of different sections some general results of this growth may be noted. In 1860 agriculture still remained the great economic activity of the country and occupied the chief attention of nearly two-thirds of the population. Though this proportion was on the decline—it appears to have been about four-fifths of the population in 1820—it is evident that the country was still essentially a nation of farmers. The census returns showed over 400 million acres of land included in farms, a little more than one-third being improved land; the cash value of farm land and buildings was returned at \$6,650,000,000, probably something over one-third of the wealth of the country. The output of the great staple products of agriculture was increasing more rapidly than the population and thus provided means for the expansion of our export trade. Among the great staple crops of the country, judged by the value of each, corn was far in the lead; its value, around \$500,000,000 in 1859, was about twice that of either the wheat or the hay crop, while the cotton crop commonly ranked about the same as that of wheat or hay in importance. Considerably below cotton in value came oats, potatoes, and tobacco; all other crops were individually relatively unimportant. The annual value of livestock products is difficult to estimate. In any case it involves considerable duplication since most of the corn and hay were fed to the livestock.

The Census of 1860 returned the value of livestock on the farms at \$1,100,000,000 and the value of those slaughtered at \$212,000,000. Butter and milk were the only important products of the live animals, some 460,000,000 pounds of the former being reported by the census. Finally, it may be noted that the value of homemade manufactures of the farms, returned as \$24,000,000, had evidently been steadily declining with the tendency toward greater specialization. Though the inaccuracy of census figures for this period must be acknowledged, they do give us a fair notion as to the relative importance of agriculture and its products, and this is essential to an understanding of our economic history. Agriculture was the means by which most of the people earned a livelihood; its prosperity or depression largely determined that of the country; its products were the chief basis of the country's manufactures and furnished the bulk of the commodities entering into the internal and the export trade.

The Development of Mining Industries. The most important developments in the mining industries outside of the precious metals during this period were those in coal and iron. As late as 1820 but little use had been made of the great coal resources of the country since the abundant timber

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had met the need for fuel. But as the supply of easily obtainable wood became exhausted in many localities and as new demands for fuel arose, science came to the rescue and inventions showed how coal could be used not only in place of wood as fuel but for new purposes as well. At first the chief use was for domestic heating; after about 1825 it began to be used in steam engines, though not in railroad engines; with the introduction of illuminating gas in the thirties soft coal found a new use; about the same time coal began to be used in place of charcoal in the iron manufacturing industry. Pennsylvania, the center of the coal-mining industry, possessed practically all of the anthracite coal in the country as well as large deposits of bituminous coal. After the construction of railroads and canals provided facilities for getting the coal to market, the output rapidly increased. Though the country's total production of coal in 1840 was less than 2 million short tons, it had risen to about 16 million tons by 1860 or about one-half ton per capita. Somewhat more than one-half of this total was anthracite and nearly three-quarters of the total was mined in Pennsylvania. Ohio and Illinois were next in the order of importance in output. The number of workers in the mines was around 40,000 and the total value of the output at the mines was probably under \$25 million. Though this was only about one-half the value of the output from the gold mines at this date, it was much greater than that of any other mineral product.

The mining of iron ore during this period was carried on at numerous points near the Appalachian chain from New England to Virginia, but it was concentrated in Pennsylvania. Farther west small amounts of ore were obtained in Ohio, Kentucky, and Missouri and the great ore deposits in the Lake Superior region, first beginning to attract notice during this period, were drawn upon after 1853 for a small though rapidly increasing amount of ore. Although the growth of iron mining was at a rapid rate, the total output of ore in 1860 was under 3 million long tons and its value less than \$8,000,000.

Among the other baser minerals there was none with an output of appreciable value. A little copper was secured from the southern Appalachian region but the rich deposits in northern Michigan were little known in 1850 and, though they yielded three-quarters of the country's total output in 1860, that output was only about \$3,500,000 in value. Lead was obtained from Missouri and the region about southwestern Wisconsin; salt came from scattered districts but chiefly from New York. The petroleum industry was just starting in western Pennsylvania in 1859 and various other mineral products of still less importance were obtained in different localities. In addition there was some quarrying of stone, marble, slate, and granite, the total value of which was also small. As far as the precious metals were concerned there was practically no silver produced in the country before 1859 when the discovery of the Nevada mines first started the growth of this industry. About \$1 million

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would equal the total product obtained theretofore. Gold mining had been carried on with some success chiefly in the southern Appalachians before the discovery of the California mines, but the total output up to 1848 was less than \$25 million in value. The opening of the gold mines in the Far West has already been described; here it will suffice to note that the total output of gold in the country for the 12 years 1848-1859 amounted to over \$600 million in value. Judged by the value of the output, gold became by far the most important mineral product of the country.

Even with the great increase in the output of gold that occurred in the fifties, the mining and quarrying industries as a whole were not very important factors in the economic life of the nation. The returns of the Census of 1860, admittedly incomplete, indicate that these pursuits employed over 100,000 wage earners and that the total value of the products was something over \$100 million. Obviously, measured by the number of people employed or by the value of the product, this industry did not make a very important contribution to the economic development of the country. Indirectly as a source of supply of certain raw materials, some of which were the basis of various manufacturing industries, it helped to make the country more self-sufficient.

The Timber and Other Extractive Industries. The forests of the country provided one of its important natural resources. Their very abundance, however, increased the difficulties of the pioneer farmer who had to clear the land of the standing timber before he could cultivate the soil in the region east of the Great Plains. The uses to which this resource was put were innumerable: it furnished most of the country's fuel; it was the chief material used in buildings; and it was an important element in a great variety of manufactured products. Abundant supplies of timber were available in practically all the earlier settlements. As long as such supplies remained most of the timber cut was used for local needs; as population increased and as cities developed and local forests disappeared, resort to more distant sources became necessary and the cutting of timber took on a more commercial aspect. Timber began to be cut in regions far from the market, usually where rivers were found down which the logs could be floated to navigable waterways. Northern New England and even the South began to supply the seacoast cities of the North; western New York and Pennsylvania, the Ohio river markets; still later the resources of Michigan and Wisconsin were drawn upon for the needs of the unforested prairie settlements. The lack of adequate data makes it difficult to estimate the contributions of this industry to the nation's wealth, especially since so much of the timber used never reached the general lumber market. Yet there is good reason to believe that the value of the timber used was much greater than that of all the mineral products of the country. Among the extractive industries it ranked second to agriculture, though doubtless a very poor second.

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Another natural resource was found in the various fisheries. This industry carried on for commercial purposes had centered in New England in previous periods. From 1818 to 1860 the industry enjoyed a period of steady expansion and general prosperity. To the catch of cod, formerly by far the most important, was added that of mackerel, and from Connecticut southward that of oysters, herring, and muskaden. A steadily increasing proportion of the catch was consumed in the domestic market, and exports, except for a small amount sent to the West Indies, practically ceased. The cod fishery retained its position as the most important of this group and attained its maximum size about 1860 when the gross tonnage of the vessels employed was 136,000 and the value of the catch about \$3 million.

Still larger and more important was the whaling industry which experienced its most rapid growth and greatest prosperity during this period. It was carried on from Massachusetts. As the supply of whales in the Atlantic waters became depleted, the whalers turned to the Pacific and after about 1820 that became the chief source of supplies. The whaling fleet attained its maximum size in 1858 when nearly 200,000 tons of shipping and about 600 ships were employed and the value of the products was some \$8 million. Thereafter the introduction of petroleum, which provided a cheaper substitute for the chief product of the whale, caused a rapid decline of this industry. On the inland waters of the country, Lakes Erie and Michigan were the only places where fishing on a commercial basis attained an appreciable growth and even there the catch was small. Elsewhere sporadic fishermen secured supplies for themselves and the local markets and, although the aggregate of their catch may have been considerable, few could depend on this pursuit for a living.

None of the other extractive industries made any appreciable direct contribution to the country's wealth. We can only note the fur trade, chiefly significant for the part it played in the exploration of the West. In the older sections of the country the rapid advance of settlement and the activities of the hunters and trappers soon practically exterminated the more valuable fur-bearing animals. But the explorations of Lewis and Clark helped to call attention to a new source of supply in the Far West and during the first half of the nineteenth century that region was the center of this pursuit. St. Louis became the headquarters of the trade. Various companies such as the Rocky Mountain Fur Company or the American Fur Company dominated the business; in the disputed Oregon territory, after the loss of Astoria in 1812, it was under the control of British companies. Through the activities of the hunters and trappers the resources and routes of travel in this region became known and the way was made easier for the people who in the forties, when the fur trade was on the decline and when the companies' opposition to settlers weakened, began to emigrate to the Far West.

CHAPTER XXI

THE GROWTH OF MANUFACTURING INDUSTRIES, 1815-1860

Introduction. The growth of manufacturing was one of the significant features in our economic development during this period, not simply because of the rate of growth but also on account of the changing character of manufacturing owing to the introduction of factory methods and the reactions of both of these factors upon the social and political life of the nation.

The Chief Causes of Growth. The factors affecting growth were numerous. As a basis for understanding them, one must recall the earlier analysis of the conditions that determined such development of manufacturing as took place in the colonial period. Some of those conditions checked the growth of certain lines of manufacturing and some were a stimulus to the development of other lines. The influence of these same conditions is strongly reflected in this later period as well. However, new developments were constantly tending to change the older conditions and the net result was to give an added stimulus to manufacturing.

Foremost among the causes of growth was the increase in population. This, on the one hand, created a greater demand for manufactured goods; under the existing conditions, many manufactures if produced at all had to be made within the country. On the other hand this population provided a greater supply of labor for manufacturing and of raw materials upon which these industries were built. The growth in the country's wealth and the rising standard of living also served to increase the demand for manufactured goods, both domestic and foreign. Two of the outstanding obstacles to the growth of manufacturing in colonial times, the relative scarcity of labor and of capital, still continued to check growth; but the changes taking place somewhat modified their effects. Most important were the improvements in technological processes and the introduction of laborsaving machinery. The new machinery not only decreased the amount of labor required but in many cases made it possible to substitute relatively unskilled labor for the skilled labor which had been particularly scarce. At the same time, by decreasing the cost of production, it served to increase the demand for many of these products. On the other hand it made necessary the use of more capital, which was supplied in part by the increasing wealth of the country. More and more of the steadily accumu-

lating savings were being diverted to the use of manufacturing industries. Also the development of financial institutions and credit facilities together with the introduction of the corporate form of organization, as will later be described, made it easier to secure the larger sums of capital which the new methods necessitated.

Probably the chief effect of the improved transportation facilities was to check the wide dispersion of production in many lines of industry and to further the tendency toward concentration of production in the regions best suited to any given industry. However, it is to be noted that under these new conditions that region might prove to be abroad as well as in this country. At the same time lower transportation costs were not without their influence on the growth of manufacturing for, without the wider markets thus made available, there would have been a check upon the use of large-scale methods of production, and consequently higher costs of production. Without the lower transportation costs there would have been higher charges for getting the goods to market. By reducing both of these cost factors the demand for goods was stimulated.

Among the more artificial stimuli employed to promote the growth of manufacturing may be mentioned the various forms of local aid which, however, were more influential in determining the place chosen to locate a plant than in stimulating the general growth of an industry, and the protective tariff. The fact that the tariff was now more extensively employed than ever before was in part owing to the more rapid introduction of the new technological improvements in England, a change which, combined with lower costs of transportation, tended to check the growth of certain lines of manufacturing in this country, except as it was counteracted by the tariff. However, the development of the protective tariff and its influence can best be explained at a later point.

Changes in the Economic Organization of Manufacturing Industries. The developments just mentioned not only exerted great influence upon the growth of manufacturing but began to work changes of far-reaching consequences in the economic organization of these industries. However, it was not until the period after the Civil War that the full effects began to be felt. In England the changes incident to the introduction of the factory system were the chief factor in bringing on what is known as the Industrial Revolution. In this country, although we escaped most of the suffering and violence that accompanied that period in England, the changes often came in more rapidly; yet it was an evolution rather than a revolution. One reason for this was the relatively undeveloped state of many manufacturing industries in this country as compared with England—there was less to be changed. We had no such development of the domestic system of industry as existed in England, particularly in the textile industries where new machinery deprived many skilled artisans of

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their chief means of earning a livelihood and the suffering of the workers was most marked. As much of the cloth made in this country was only one of the by-products of farming and a household economy, the transfer of this work to the factory had little effect upon the earning power of the worker.

Another reason was that, in England during a considerable portion of the period when this transition was taking place, the manufacturing industries were suffering from the difficulties occasioned by the Napoleonic wars and their aftermath. In this country, notably after 1808 except for the reaction after the War of 1812, manufacturers had the benefit of a rapidly expanding market so that it was possible to absorb the output of the new factories without seriously decreasing, at least at the start, the outlet for the products previously turned out in the household, the handicraft shops, or the small local mills. In fact for some time the output of this latter group continued to increase along with the factory output though at a less rapid rate.

These developments of course took place in different industries and in different sections of the country at varying periods of time. The changes in the economic organization of each line of manufacturing can be understood only by remembering the characteristics of each industry, the nature of the technological changes made, the time when they were introduced, and the conditions affecting the extent of the market for the product of a given industry at different periods of time and in different sections of the country.

The continued expansion in the output of products manufactured in the household, generally as by-products of farm life, was made possible by the growth of population and the settlement of the West. Up to the advent of railroads at least, these conditions tended to reproduce the household or local economy that had developed earlier and still existed in the East. Though the manufacture of textiles was one of the earliest to be transformed by factory methods, the household output of cloth and clothing did not begin to diminish until the thirties. In 1820 it was estimated that two-thirds of the textiles used were made in the families. That the family output could be large is indicated by the fact that in 1822 a prize given for the largest production of cloth in a year went to a family that had made 1,600 yards. Although in 1825 over 14,500,000 yards of cloth of varying kinds were produced in the state of New York, according to its census, a decade later this output had fallen to 8,500,000 yards. From that period, the cheaper factory products rapidly displaced those of the household. The products of flax and linen were the first to be abandoned in the face of competition from the cheaper cotton. Sometimes the cotton was spun and woven in the household, but the introduction of spinning machinery soon made it cheaper to buy the yarn and attempt

to do only the weaving in the household. It was not long however, before the power loom appeared and then hand weaving was also generally abandoned.

Although, one after another, the numerous household manufactures experienced a similar fate, in most cases it overtook them more slowly and many lingered on, but with a steadily dwindling output, until after the Civil War. In the case of woolen goods the fact that more people grew their own wool than grew cotton and the later introduction of factory methods in their manufacture somewhat prolonged the life of this household industry. Among the farming households the slaughtering of livestock, the salting or smoking of meat, and the manufacture of such by-products as tallow, soap, and candles remained common until long after the Civil War; but a steadily decreasing proportion of the products was sold away from the farm and the packing house output took its place. Even the making of butter and cheese was beginning to be carried on in a few factories that started up in the fifties. Long before that time the household manufacture of such products as nails had been abandoned, and most of the various products of wood as well. By 1860 few households except in the more inaccessible localities were made up of a family group that was a Jack-of-all-trades such as had been so common in the eighteenth century. Greater specialization was the order of the day.

In the case of the manufactures formerly turned out by the handicraft shops, in lines where machinery was introduced the business was shifted to the factory; other products requiring only simple tools and skill were left under control of the craftsmen. Thus the cabinet workers and carpenters still found ample demand for their products though factory-made furniture was beginning to enter the market. The shops and households engaged in making clothing were not at the first greatly affected by the introduction of the sewing machine, for the machine could be used in the shop or home as well as the factory. Although the advantages of better supervision and centralization of the work under one roof did lead to a considerable growth of the ready-made clothing industry under factory organization in a few cities in the fifties, many found it cheaper to distribute the material among workers who made it up in their homes. The custom tailor, catering to a more particular clientele, was little affected by this change. In the boot and shoe industry where the practice of distributing materials to be worked up in artisans' shops had developed a considerable trade based on the domestic system, one process after another was transferred to the central shop of the merchant entrepreneur. First the stock began to be cut there and then, in the forties as machines were introduced for other processes, that work was absorbed by the shop. When the sewing machine was adapted for upper leather work in 1852, another shift occurred. Lasting and bottoming continued to be done in

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the "ten footers" of domestic workers until after the Civil War, when the invention of machines for these processes and the introduction of steam for power resulted about 1875 in putting the whole process under one roof and the factory system became supreme. These illustrations will suffice to indicate the character of the changes taking place in various of the crafts at this period. There still remained many but slightly affected by the new machinery such as the saddlery and harness makers, sheet-metal workers, bakers, coopers, and wagon makers.

Another type of manufacturing enterprise was that which in the preceding period had been carried on in the small mills and plants. In this group as in others the character of the product and the technological methods evolved in producing it largely determined such changes as occurred in economic organization. In an industry where the product was relatively inexpensive or difficult to transport, extensively used, and the raw material generally available, the industry continued to be carried on in small plants widely scattered over the country and supplying chiefly local needs. Such was the situation in the case of the lumber-mills and gristmills to be found almost everywhere. The Census of 1860 returned far more "manufacturing establishments" in these two lines than in any other—almost 20,000 sawmills and nearly 14,000 gristmills. Though most supplied only a local market, the mills situated near cheap water transportation often produced for distant markets and were operated on a larger scale. Local slaughtering plants were numerous; somewhat less widely scattered were the small distilleries, breweries, tanneries, blacksmiths and iron forgers, printing plants, and brick kilns.

In many of these industries the small plant or mill was beginning to feel the competition of the larger factory. The slaughtering business assumed a factory organization with the development of the larger packing plants and Cincinnati became the chief pork-packing center of the country. The little carding and woolen mills, which had sprung up in the West to supply local needs when settlers poured into that region, were beginning to disappear before the competition of Eastern factory products in the fifties, the small iron furnaces in the older states were being shut down, and the products of the larger farm implement factories were beginning to supply needs formerly met by the local blacksmith and his forge. What may be called the mill period in these industries was already on the wane in many of them after the middle of the century.

The Rise of the Factory System—The Cotton Industry. The introduction of the factory system which has been foreshadowed at so many points in the preceding account may be said to have taken place first in the manufacture of cotton cloth. What has been called "the first modern factory in America" was started at Waltham, Mass. in 1814 for the manufacture of cotton cloth. Mills for carding and spinning cotton with power-

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driven machinery had already been in use for some time, but in this Waltham plant power-driven looms for weaving were also introduced and the whole process of manufacturing cloth was carried on in one plant under a well-organized system of management. The success of this plant soon led to others at the same place. When more water power was needed, Boston capitalists turned to the Merrimack River and in 1822 organized a company that started a new factory at Lowell. Perhaps this may be considered the first city in the country to owe its origin and subsequent growth to manufacturing. By 1834 there were 19 cotton mills at Lowell. It was the predecessor of many cities which soon sprang up along the numerous falls of the Merrimack and made the valley of that stream one of the great textile-manufacturing districts of the country. In consequence Massachusetts by about 1830 outranked Rhode Island, the earlier center of the industry, as a cotton-manufacturing state, though a part of this growth occurred in the Fall River district of southern Massachusetts.

Along with spinning and weaving went plants for the bleaching, dyeing, printing, and finishing of cloth. Outside of northern New England these operations were more frequently carried on in separately owned and managed concerns, in this respect following the type of organization prevalent in England. Thus in the middle states, particularly about Philadelphia where there were a great many hand-loom weavers, the spinning and weaving were generally carried on in separate establishments and on a small scale of operations. Here, too, ownership was more frequently invested in individuals or partnerships. In the case of the larger manufacturing enterprises of northern New England, many of which represented an investment of \$1 million or more, the corporate form of ownership was common. In fact it was here that corporations were first frequently employed in the manufacturing enterprises of the country.

Outside of New England and the Hudson, Mohawk, and Delaware river valleys the development of this industry was slow. There were numerous scattered mills in the South engaged in spinning yarn and less frequently in weaving cloth, but few were of any appreciable size. In the West, Pittsburgh had been the chief seat of this industry's growth but after 1850 this development was checked by the competition of the Eastern factories. It was here that the hand-loom weavers, who were numerous, resorted to violence when power-driven looms began to be introduced in the forties.

The result of the rapid advance in cotton manufacturing was to make this, in 1860, the leading manufacturing industry in the country measured by the amount of capital and labor employed or the net value of the product. "The consumption of cotton had increased from 5,000,000 pounds (about 1790) to 423,000,000 pounds or more than eight times as fast as the population." Though far below Great Britain in volume of

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output, the United States was second to that country; whereas it still was unable to compete with her in the finer grades of product, it had reached a point in the production of the coarser grades of cloth, which were better suited economically to our factory methods of manufacture, such that it was successfully exporting considerable quantities of them.

The Woollen and Other Textile Industries. In the woollen industry the introduction of power-driven machinery and factory methods was a slow process and the extensive household and small mill output was not appreciably diminished until about 1840. This manufacture had been greatly stimulated during the War of 1812. The flood of British imports following the end of the war and the succeeding panic were disastrous for most of the mills producing for anything but small local markets. Better conditions prevailed up to about 1826 after which date a depression in the industry in England, resulting in lower prices, combined with other difficulties at home brought another period of sore trial lasting until 1830. During this decade and a half the inefficient concerns had been weeded out and such as survived had been compelled to introduce the best machinery and more efficient methods so that when prosperous times came after 1830 the industry under factory methods was established on a fairly firm basis.

The first company to adopt the Waltham system in the woollen manufacture was started at Lowell in 1830. From that time the growth was considerable, though subject to marked fluctuations arising from the business cycle and the frequent tariff changes. One difficulty arose from the fact that the domestic wool supply was not sufficient to meet the requirements for consumption. The country was forced to import large quantities of foreign wool, chiefly the medium and coarser grades, and the tariff duties imposed on raw wool to protect the grower were not always adequately offset by the duties on manufactured products. Thus the greater portion of foreign wool consumed was imported in the form of finished manufactures. The introduction of new fabrics in which some cotton was employed along with the medium grades of short wool chiefly grown in this country aided in promoting the growth of certain branches of the industry. The lack of long combing wool required for the worsted fabrics, which after 1840 were so rapidly displacing the fine wool broadcloth in popular favor, was a factor preventing any appreciable development of this branch of the industry before 1860. American inventive genius added no small contribution in the form of new machinery, notably for carding, knitting, and the weaving of carpets. The manufacture of knit goods, flannels, Negro clothes, felts, and carpets became strongly entrenched branches of the industry.

Wool manufacture as a whole, however, did not develop the same degree of concentration under the factory system as did the cotton manu-

facture. Even in 1860 there were innumerable small mills scattered all over the country and many had a few looms as well, though most were confined to carding and fulling. Weaving was more frequently done with hand looms, especially about Philadelphia where the manufacture of fine cloth as well as of carpets was prominent. Even where larger factories dominated, as in New England, the capital investment in concerns was smaller, and the corporate form of organization less frequently used than in the cotton manufacture. Southern New England was the largest producer of wool manufactures; Massachusetts took the lead away from Rhode Island and Connecticut at an early date. Pennsylvania came next with a marked concentration in Philadelphia; New York, where the manufacture of knit goods in the Mohawk Valley was a prominent feature, was third. The total gross value of the various wool manufactures of the country in 1860 was about \$80 million giving the industry a place among the ten largest manufactures in the country.

In the other textile industries the introduction of the factory system proceeded much more slowly and the resulting growth was far less notable. In the case of flax there were sporadic attempts to establish mills, chiefly for the manufacture of linen thread and sailcloth, but most were abandoned or turned to cotton, and no real development resulted. Only slightly better results were obtained in the manufacture of silk. Raw silk continued to be raised in this country in small amounts, in fact there was a revival of this craze in the late thirties, and some mills were set up to make the raw material into thread and various fabrics; but the process required too much careful labor to be carried on with success. After about 1840, when foreign silk began to be more generally employed, a few concerns, chiefly located in Connecticut and New Jersey, met with some success in manufacturing sewing silk, trimmings, and ribbons, the gross value of which in 1860 was only \$6,500,000.

Iron and Other Metal Manufactures. Like other industries the manufacture of iron had been greatly stimulated during the period of restricted foreign commerce after 1808 and so suffered correspondingly in the years immediately following the return of peace. The difficulties under which the industry labored were greatly increased by the fact that little advance had taken place in the technical methods employed. In England the preceding half century had brought a revolutionary change through the substitution of coke for charcoal in smelting and the introduction of Cort's invention for puddling and rolling iron. This gave the English product a much greater relative advantage in lower costs of production than it had previously enjoyed. To protect the industry against this competition high tariff duties were imposed, ranging from 40 to 100 per cent in the period between 1818 and about 1838. Somewhat aided by these duties, but chiefly by the development of many new uses for iron and the rapidly expanding

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market, the output of the industry steadily increased, though no faster than the volume of imports. Little progress was made in introducing the new methods, partly because the supply of bituminous coal required for coke was not easily obtainable in the regions where most of the industry was located. Just before 1840, however, inventions were introduced making it possible to use anthracite coal in smelting and, as this coal was abundant in the region that was the main seat of the industry, its use marks the beginning of a new period in the industry's history.

Though charcoal continued to be used in most of the smaller furnaces in the iron manufacturing district, which extended along the mountain chain from Lake Champlain to the Carolinas, many of which turned out a grade of iron particularly suited for castings and forgings, the output of these charcoal furnaces failed to increase, whereas the output of iron smelted with anthracite and chiefly made in Pennsylvania grew rapidly. In 1855 for the first time the output of anthracite iron exceeded that made with charcoal and by 1860 it was nearly twice as great as the latter. Meanwhile progress was being made in the use of bituminous coal or coke for smelting. This coal was easily obtainable by the rapidly growing portion of the industry located in western Pennsylvania and the states adjacent thereto, but a local supply of wood for charcoal was still generally available there and in 1860 only about an eighth of the country's iron output was smelted with soft coal.

By that date the total iron production of the country had risen to 1 million tons, nearly 20 times the estimated output in 1810. Pennsylvania produced more than one-half of the total but a steadily mounting proportion of its output came from the western portion of the state. Though the region east of the mountains from New York to Virginia still turned out over one-half of the country's output, the valley of the Ohio and its tributaries was rapidly overtaking it and as early as 1850 Ohio had become the second state in the amount produced. At this period, however, the use of ore from the Lake Superior mines, which later became so important a factor in the western development of this industry, was just beginning.

The use of coal for fuel helped to make possible a much larger scale of operations than when nothing but charcoal was used and the steadily increasing use of machinery made large-scale operations more and more economical. By 1860 several concerns with an investment of \$1 million or more were to be found in the industry and small producers in the Eastern states were abandoning the business. Though some of the larger concerns resorted to the corporate form of organization, this was less common than in the textile industry, and the individual or partnership form of ownership and control prevailed even in the case of fairly large undertakings. In the more remote districts where these plants were fre-

quently located, the iron master exercised almost feudal powers over the little settlement that sprang up about his furnaces.

Upon the basis of the raw products of this industry there were built finished products. In addition to the casting of pots, kettles, and other household wares such as had been carried on in colonial times, an extensive branch of the industry engaged in the manufacture of stoves was developed with Philadelphia, New York, Albany, and Cincinnati as important centers. The railroads created a new demand for various products used in the rolling stock and the road bed. Previous to about 1845 the iron rails used were imported, the duty being remitted; after that date, aided by an effective duty and improved methods, they began to be turned out in this country. The introduction of steamboats had a similar effect though iron was little used in their framework before 1860. Another important new demand developed with the general introduction of the steam engine and the various kinds of machinery requiring iron in their manufacture. Though foundries, machine shops, and engine works sprang up all over the country, the larger works were concentrated in the North. Many, such as the Baldwin Locomotive Works established in 1832, began to specialize in a few lines of products, the manufacture of mill machinery or of sewing machines. New England became the chief center of minor metal manufactures, notably those engaged in producing small hardware, firearms, clocks, copper bars, and tinware. The fact that the consumption of iron is estimated to have increased from 5 pounds per capita about 1800 to nearly 120 pounds by 1860 is perhaps the best indication of the manifold new uses for this metal and the growth of this industry. Foreign sources appear to have supplied only about one-fourth of this consumption during this period.

The Introduction of Factory Methods in Other Lines of Manufacturing. The spread of what may be called factory methods to other lines of manufacturing, though less rapid and spectacular in results than in the textile and iron industries, was a common feature of this period. The growth of large packing-house plants in the slaughtering business has already been noted. In the printing and publishing business, especially that devoted to books and newspapers, large concerns were coming to the front. The refining of sugar tended to concentrate in a few concerns, as well as the manufacture of the new lines of agricultural machinery; the introduction of illuminating gas gave rise to an industry that ranked among the largest in point of capital invested in individual plants.

In addition there were the numerous industries where small mills, plants, or shops still turned out the greater portion of the country's production but where larger concerns operated under methods more nearly resembling those of a factory were steadily increasing their proportion of the total production. Such was the case among the breweries, the dis-

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tilleries, the manufacturers of leather boots and shoes, furniture, carriages and wagons, to mention a few of the most important. Thus by 1860 the process of introducing factory methods was well under way though there were few branches of manufacturing where they had become dominant. "In 1794 Tench Coxe described our manufacturers as farmer craftsmen; in 1825 Zachariah Allen described them as village artificers; and in 1860 they were rapidly becoming city operatives."¹

The Manufacturing Industry in 1860. A brief summary of the situation as shown by the Census of 1860 will reveal the results of the growth during this period and serve to indicate the relative importance of this activity in the economic life of the nation. The total gross value of manufactured products was then about \$1,800,000,000. A deduction from this of the cost of the raw materials used gives a net value of about \$800,000,000 which is the best measure of the contribution of manufacturing to the national income. This net value, it will be noted, was not much greater than the value of the two most important agricultural products, but it put manufacturing in the second place among the great branches of industry. The amount of capital invested in manufacturing was something over \$900,000,000 and the number of "hands employed" nearly 1,200,000, a little less than a quarter being females.

The most important branches of manufacture measured by the net value of the product of each were cotton goods, iron, sawed lumber, boots and shoes, ready-made clothing, flour and meal, steam engine machinery, woolen and worsted goods, and leather. The net value of the products ranged from over \$50,000,000 in the case of the first mentioned to \$26,000,000 in the case of leather. The marked concentration of manufacturing in the North Atlantic states is shown by the fact that that section had about three-quarters of all the capital invested and turned out about the same proportion of the total net value of manufactured products. The contribution of only one-tenth of the total net value of manufactures, made by the region south of the Potomac, the Ohio, and the state of Missouri, shows the backward condition of manufacturing in the South.

The Tariff History, 1816-1860. Though the tariff is a subject that is related to the fiscal needs of the government as well as to various industries besides manufacturing, its history can best be taken up at this point since the controversies that arose over the subject centered largely about protection for manufacturing. During the period 1789-1815 the tariff laws of the country had been shaped chiefly by the fiscal needs of the government; in the main the need for revenue had determined the customs duties imposed and the desire to provide protection for industry

¹ CLARK, V. S., "History of Manufactures in the United States, 1607-1860," Washington, 1916, p. 463.

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had been a minor consideration. In the period that followed this situation was reversed for, although customs duties still continued to provide by far the greater portion of the Federal government's revenue—most of the time nearly 90 per cent—yet the actual duties imposed were chiefly determined by the desire to provide protection for various industries. Thus, this period in our tariff history may be called the period of moderate protection. During these years, however, two fairly distinct trends in tariff legislation are discernible, so that the period can be divided into two parts: (1) an upward trend in duties with increasing emphasis on protection ending in 1832; (2) a tendency to lower duties with slightly less emphasis on their protective character beginning 1833 and continuing, with a brief interruption between 1842 and 1846, until 1861. (See the chart on page 690.)

A striking feature of our tariff history is the strong demand for protection that has arisen in the period of reaction and depression following any prolonged war. A protective tariff is one of the forms of relief toward which suffering industry turns at such a time and the years following the War of 1812 well illustrate the point. The conditions during the war had given an abnormal stimulus to manufacturing; when the return of peace decreased the demand for many of these products at the same time that English manufactures were flooding the market and, aided by the use of improved machinery, were underselling the domestic products, a cry for more protection arose. The result was the Tariff Act of 1816. Though the need for more revenue to help meet the increased burden of indebtedness occasioned by the war was an important factor and though the duties imposed by this act were less designed to provide protection than those in the succeeding acts, this tariff reflects the beginning of the shift toward a policy of protection.

The argument that the country needed to develop manufacturing so as to be more nearly self-sufficing in time of war—the force of which had been greatly strengthened by the experiences during the recent war—secured wide acceptance and many Southern leaders who later opposed protective duties supported this bill. The protective features were especially apparent in duties of 25 per cent, to be reduced to 20 per cent in 1819, levied on most cotton and woolen goods and those on manufactures of iron, especially rolled bar iron. The policy of imposing what amounted to minimum specific duties on the cheaper grades of cotton cloth soon made these duties highly protective when the prices of such fabrics declined. Duties of 30 per cent were imposed on such things as hats, carriages, paper, leather, and manufactures of leather and of wood. There was also a long list of specific duties, that is, duties imposed upon the physical unit of a product instead of on its value. From the protective point of view the most important were those on boots, candles, fish, win-

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dow glass, various iron products, indigo, lead, spirits, and sugar; many of the other duties were primarily for revenue. But few products were admitted free and a duty of 15 per cent was imposed on all products not elsewhere specified. The general average of the duties under this act, estimated at about 20 per cent, did not represent any marked advance over the level prevailing before the war and afforded only moderate protection. Hence as business conditions grew worse a demand for more protection soon arose.

It was in response to this demand that the Tariff of 1818 was passed. This act, which was purely protective in character, postponed the reduction in the duties on cotton and woolen goods until 1826 and considerably increased the duties on various forms of iron products. Soon afterward the difficulties in business culminated in the panic of 1819 that bore with especial severity upon agriculture and commerce, which had suffered less than manufacturing in the years immediately following the war. Another effort to increase duties barely failed of success through the lack of one vote in the Senate in 1820, but the agitation was continued and in the Tariff of 1824 duties were once more raised. On manufactures of wool the duty was raised to $33\frac{1}{3}$ per cent, though this was in large measure offset by raising the duty on raw wool costing over 10 cents a pound to 30 per cent. The duties on cotton, flax, hemp, and silk manufactures were also advanced along with those on iron, glass, and paper manufactures. This act was also marked by the effort to provide more protection for agricultural products through the increase or imposition of new duties on wool, hemp, wheat and flour, oats, butter, beef and pork, potatoes, etc. Mining and quarrying came in for their share through the duties imposed on lead, coal, marble, and slate. Whereas some changes reflected the desire for revenue, protective considerations clearly dominated the provisions of this act.

Though general business conditions were more normal in the years immediately following, the woolen industry suffered from the reaction of a depression in England which led to the sale of large quantities of British goods in the American market at unusually low prices. This was facilitated by the practical removal of the English duty on raw wool at this time. But the growth of manufacturing enterprises helped to increase the political influence of those interested in this branch of industry and the tariff question had by this time become one of the important political issues. The continued demand for more protection resulted in the Tariff Act of 1828 which marks the extreme of the protective movement during this period. The provisions of the act also reflected the political maneuvering of the time, for those opposed to higher protection inserted various duties on raw material employed in industries such as shipbuilding, rum distilling, or the manufacture of coarse wool goods in the hope they would

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prove so obnoxious, particularly to New England, that the bill would be defeated. In spite of this feature the bill was passed and the act became known as the Tariff of Abominations. Although, in the resulting law, the duty on most woolen goods was raised to 45 per cent and a system of minimum rates was adopted, a heavy duty on raw wool offset much of this protection. There was a considerable advance in the duties on most iron products and some in the case of cotton goods and manufactures of glass. Hemp, flax, and molasses duties were made very high and those on indigo, distilled liquors, and slate appreciably advanced.

The South, more vigorously opposed to protection than ever, was bitterly disappointed at the passage of the bill and New England interests were far from pleased with many of its provisions, so that it was not long before modifications were secured. In 1830 the duty on molasses was cut in half and the drawback given on the exportation of rum, which had been stopped in 1828, was restored. Another act reduced the duties on coffee, tea, and cocoa which were purely revenue duties in character, partly as a concession to the free traders, partly because the fiscal condition of the treasury was becoming very favorable. Finally, in 1832, further modifications were made and the objectionable abominations removed. The system of minimum duties on wool and cotton goods was practically abolished, the duties on hemp and pig and bar iron reduced, and those on flax and the cheapest raw wool abolished. At the same time a large number of commodities chiefly of tropical origin and essentially revenue yielding in character were transferred to the free list. The general level of duties was thus reduced to about that of the Tariff of 1824.

Though this act marked some concession to the opponents of protection, the South, where this opposition centered, was far from satisfied, and in November, 1832, a South Carolina convention passed an ordinance nullifying the tariff act and began preparations to resist its execution by force of arms. In this juncture President Jackson took a firm stand, quietly preparing to enforce the law and uphold the inviolable character of the Union, and the other Southern states proved unwilling to support South Carolina's extreme position. However, the determined attitude of the South made it clear that concessions were advisable. Prosperous business conditions and the more firmly established position of many manufacturing industries combined to make protection appear less essential. Furthermore, less revenue was needed for the surplus was large and nearly all the government debt had been paid off. Under these circumstances there was passed what is known as the Compromise Tariff of 1833. Under this law there was to be a gradual reduction of all duties in excess of 20 per cent; one-tenth of the excess was to be taken off every two years until January, 1842, when half of the remainder of the excess was to be dropped and the rest six months later. In addition worsted

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goods and certain manufactures of silk and linen were at once transferred to the free list and a number of minor articles made free of duty in 1842.

But this low level of duties provided for under the Compromise Tariff remained in effect for only a couple of months when it was replaced by the Tariff of 1842. A momentary shift in the political party in power had brought in the Whigs and, though there was less popular demand for protection than earlier, the severe economic depression following the panic of 1837 helped to secure more support for this measure. The deficits that faced the Treasury afforded an added reason for advancing the customs duties. The result was a measure that considerably increased the protective duties and also imposed duties on many articles previously admitted free, in the latter case primarily for the sake of revenue.

Another change in the party in power led to a new tariff act in 1846 commonly known as the Walker Tariff. This act was constructed on a new basis; eight schedules were established lettered from A to H and a fixed ad valorem duty was imposed on the commodities placed in each schedule. The rate on schedule A, which included only distilled spirits, was 100 per cent; on schedule B, which included articles of luxurious consumption, 40 per cent; on schedule C, in which were placed most of the goods that were seeking protection such as manufactures of metal, wool, leather, paper, and glass, the duty was 30 per cent; cotton manufactures were placed in schedule D where the duty was 25 per cent. In the remaining schedules the duties ranged from 20 per cent down to 5 per cent; in a final schedule were included a small number of commodities admitted free of duty, tea and coffee being the most important.

This moderately protective tariff was allowed to remain in force for an unusually long period of time. The continuance of the same political party in power, a considerable annual surplus in the government receipts, a decade of advancing prices and general prosperity, and the diversion of public attention to other political issues resulted in the tariff controversy dropping into the background. However, the increasing surplus in the government's annual receipts was a temptation to extravagant expenditure and there was little opposition to a moderate scaling down of duties provided by the Tariff Act of 1857. Under this act the duties on commodities in schedules A and B were cut to 30 per cent; on those in schedule C, to which cotton manufactures were transferred, to 24 per cent; and a slight reduction was provided in the other schedules together with an enlargement of the free list. Thus the period ended with a general level of duties around 20 per cent providing a very moderate degree of protection.

In 1854 an important reciprocity treaty was made with Canada. In addition to concessions in the fisheries and navigation of inland waters including free navigation of the St. Lawrence for American ships, it provided that the products of the farms, forests, and mines of either

country were to be admitted into the other free of duty. Though probably of greater advantage to Canada it resulted in a very considerable increase in the trade between the two countries. A subsequent increase in the Canadian duties on manufactured goods, which it was felt was contrary to the spirit of the treaty, combined with the opposition of some special interests and the animosity aroused during the Civil War, led the United States to denounce the treaty in 1865 effective the following year. This resulted in a substantial loss in trade in both countries.

The Tariff Controversy. The attitude of the different sections of the country toward the protective tariff was largely determined by what each believed to be its economic interest in the matter, though questions of party politics were not without influence. From the first the Middle Atlantic states, particularly Pennsylvania, were the stronghold of the protectionist sentiment. In New England, at the beginning, there was considerable opposition from the commercial interests but, as manufacturing grew in importance, this opposition was overcome and from about 1830 on New England was strongly protectionist in attitude. In the South the reverse tendency appeared. In 1816 many Southerners in Congress voted for the tariff, partly in the desire to promote national self-sufficiency, partly in the hope of developing manufacturing in the South and partly to ensure a greater home market for their cotton crop. By 1820 there was more doubt as to the likelihood of the South's developing extensive manufacturing industries; it seemed more certain that the foreign market would absorb the rapidly increasing cotton crop, in which case it was argued that protective duties on manufactured goods would be a burden on that section. So the South became the center of the opposition to protection. The states of the Northwest on the whole inclined to favor protection in the earlier years but later tended towards a shift in their position. As the manufacturing industries of this section were not extensively developed and such as existed had less to fear from foreign competition than those in the East, this section looked to the duties on its agricultural products such as wool and hemp and to the market for its foodstuffs provided by the rising manufacturing population of the East for the chief benefits to be derived from protection. Here, too, political considerations were more influential than elsewhere, for this section hoped that its support of the tariff would secure Eastern support of other measures such as internal improvements in which it was more deeply interested. It was upon such an idea that Clay's American System was based.

Although the arguments advanced on either side for or against the protective system were numerous and statement of the more important is essential to an understanding of the issue, the consideration of each must be brief. The main argument against protection was based on the

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advantages obtained from the greatest freedom of trade which, by furthering specialization of production by each country in the commodities it was best fitted to produce, enabled each through the exchange of such products to supply its material wants more economically. It was also urged that the development of manufacturing industries would bring many undesirable results: it would demoralize those employed in the factories as it was said to be doing in England; it would increase the power of capital; it would favor private and sectional interests and undermine our democracy. Another argument was that it would check the growth of our foreign commerce and our shipping. The South claimed that it had the same effect as an export tax on its cotton since much of the proceeds from the sale of cotton was used to buy manufactured goods the prices of which were increased by the tariff; also it was said our duties would lead to the imposing of retaliatory duties on American exports by foreign countries. Finally the question as to the constitutionality of such duties was raised.

In favor of protection considerable general support was secured by the argument that manufacturing ought to be fostered so that in time of war the country would be more self-sufficing and not suffer so from dependence upon foreign manufactures as it had during the Revolution or the War of 1812. The home-market argument was advanced chiefly to attract the agricultural interests especially in the West. Yet it is very doubtful whether the Western farmers really secured any appreciable advantage from protection. In the case of a few products, the most important among which were wool, leather, sugar, and hemp, where imports were necessary to supplement the domestic supply, the tariff doubtless increased the prices that the farmer received. But the great staple crops were produced in excess of the country's needs and, since the surplus was exported, duties on imports had no power to raise prices. Furthermore, up to about 1840 the Northeastern states were able to supply most of the food required by the manufacturing population; after that time, when they began to draw upon the West, the latter section was selling its surplus abroad so that prices were chiefly determined by conditions in the foreign markets. Thus the tariff had little effect in raising the price of the great staple products of the Western farmer whereas it did tend to increase the cost of many manufactured products that he had to buy.

Another argument that began to be used after about 1840 was that the tariff raised the level of wages in the country, an argument that today would be called the full-dinner-pail argument, namely, that the higher wage makes possible a full dinner pail for the worker. Although this argument makes a wide appeal and in some industries under certain conditions may hold true, most economists doubt whether the tariff has raised the general level of wages in this country and believe rather that

it has tended to lower real wages. Certainly high wages prevailed long before the protective tariff and were owing to the underlying economic conditions. Among minor arguments were those that the tariff would decrease the unfavorable balance of trade—a relic of the old mercantilist ideas—that it would attract labor and capital from Europe, and that the manufactures developed would afford employment for women and children.

The strongest economic argument used was what is called the “infant-industry” argument. This is based on the fact that in the early stages of an industry’s development, particularly where decreasing costs with increasing output are found, the costs of production are apt to be higher owing to such things as the necessity of experimentation, training the workers, and developing the technical processes and general organization. Consequently it is difficult for such an industry to get started when it has to face competition from another country where the industry has already passed through this stage of development and is turning out products at the lower costs secured by longer experience and a larger volume of output. Hence, it is argued, if the industry is one where conditions are such that it can stand on its own feet once the period of infancy has been passed, then a grant of protection during that period is justified. The soundness of this argument is accepted by most economists; the question is whether the conditions it presupposes existed at this period. A certain answer requires more accurate and detailed information than is available, but our knowledge of general conditions provides good ground for believing that there were various industries where these conditions did exist, particularly in the period immediately following the end of the War of 1812.

(1) The war had greatly stimulated many lines of manufacturing. The fact that it was not simply a question of starting new industries but trying to save and develop those already started and so lessen possible losses gave an added reason for lending assistance. (2) The more rapid introduction of the new machinery in England put this country at a distinct disadvantage which time and our inventive genius might overcome in spite of English restrictions on the exportation of machinery. Added weight was given to this argument by Friedrich List who advanced the point that in a country which was passing from what he called the agricultural-commercial stage of development to the agricultural-commercial-manufacturing stage, as was the case of the United States at this time, it was more difficult to start new manufacturing industries than in one which had already made that transition, as had England. (3) Conditions in the years between 1815 and about 1830, extremely trying for any industry, greatly aggravated the difficulties that beset the infant manufacturing establishments in this country. The necessity of readjustment

to peacetime conditions, the panic of 1819 and its reaction, as well as the conditions in England were such as to have ruined many concerns which with some protection were kept alive and with the return of better times proved able to stand alone. Although conditions varied greatly among different industries or different branches of the same industry, it is certain that there has never been a period in our history when protective duties in general were better justified—and chiefly on the basis of the infant-industry argument—than during these trying years. That some of the duties actually imposed were excessively high and that many were retained beyond the time when conditions justified them only indicate that the policy was subject to abuse or employed in an unscientific manner.

The Effects of Protection on Manufacturing. In the absence of more detailed information on such a complex problem, only a few generalizations may be ventured as to the actual effect of the protective tariff duties on the development of our manufacturing industries. The duties on raw materials and semifinished products, although somewhat stimulating their production, sometimes proved a burden on the manufacture of finished products when insufficiently offset by duties on the latter. In other cases, notably certain branches of the iron-manufacturing industry, excessive duties tended to prolong the use of inefficient and backward methods of production. On the other hand, there can be no question but what the development of various branches of industry was somewhat stimulated by the tariff. Whereas there were instances, such as the coarser cotton goods and some forms of iron manufactures, where the very fact that the products were exported seems to indicate that protection was unnecessary, there were other cases where without protection the output of various commodities would have been smaller.

Whether the increased output thus obtained justified the costs involved is another question. That the tariff was responsible for any considerable proportion of the manufacturing development that took place during this period is highly improbable. It was most influential during the first decade and a half after 1815 in helping various concerns through a particularly trying experience until most could stand on their own feet. Yet the underlying economic conditions previously explained were chiefly responsible for the general advance. The space here given to a discussion of the tariff must be justified by the political importance which this question attained both then and later, rather than by the economic effects either desirable or undesirable, for political controversy has grossly exaggerated both of them.

CHAPTER XXII

LABOR CONDITIONS AND THE LABOR MOVEMENT, 1815-1860

Introduction. The opening up of the West combined with the rapid economic development of the country in general was such that, in spite of the great natural increase of population and the influx of immigrants, labor continued to be scarce as compared with the conditions in Europe and the economic position of the laborer was relatively favorable. However, the developments that were taking place in the general economic organization of the country and the growing importance of certain branches of industry such as mining and manufacturing were tending to bring about marked changes in the conditions affecting labor. Thus the increasing specialization and division of labor, combined with the growing scale of production, were tending to develop a group of hired workers who remained such throughout their life—in short, a distinct laboring class such as scarcely existed in colonial times outside of the group of slaves.

At the same time the development of mining and railroad transportation and the transfer of many industries from the household or the shop to the factory greatly altered the conditions under which the laborer worked. Also, the increased mobility of labor and the products of labor intensified the competition both among laborers and among the employers of labor, and so reacted upon the worker. Finally, all these developments led to efforts among the workers to organize themselves for the purpose of improving their condition and so gave rise to the beginning of the modern labor movement. These and other closely related developments made this period in the history of American labor significant as initiating changes in the condition and position of the laborer which in time created new problems of the most momentous character.

The Supply of Labor. The chief factors that determine the labor supply of a country were mentioned in Chap. VII. Among these was named the number of inhabitants of the country capable of doing work. The previous account of the rapid growth of population will suffice to indicate the increased labor supply thus made available during this period.

The general willingness of the people to work (excluding the slaves, a group which, having been previously described, will not be considered in

this chapter), so striking a characteristic of the colonial period, was still notable. Even among the well-to-do, who had more choice in the matter, this spirit of work and devotion to business prevailed and, with the possible exception of some of the large planters of the South, it may be said that there was practically no leisure class in the country. The contrast with Europe is well illustrated by the comments of an acute French observer, Michael Chevalier, sent over to study our railroads. Writing in 1835 he says,

Speculation and business, work and action, these, then, under various forms, make the exclusive object to which the Americans have devoted themselves, with a zeal that amounts to fanaticism . . . The manners and customs are altogether those of a working, busy society. At the age of fifteen years, a man is engaged in business; at twenty-one he is established, he has his farm, his work shop, his counting-room, or his office, in a word his employment, whatever it may be. He now also takes a wife, and at twenty-two is the father of a family, and consequently has a powerful stimulus to excite him to industry . . . The American is educated with the idea that he will have some particular occupation, that he is to be a farmer, artisan, manufacturer, merchant, speculator, lawyer, physician, or minister, perhaps all in succession, and that, if he is active and intelligent, he will make his fortune. He has no conception of living without a profession, even when his family is rich, for he sees nobody about him, not engaged in business. The man of leisure is a variety of the human species, of which the Yankee does not suspect the existence, and he knows that if rich today, his father may be ruined tomorrow. Besides the father himself is engaged in business, according to custom, and does not think of dispossessing himself of his fortune; if the son wishes to have one at present, let him make it himself! The habits of life are those of an exclusively working people. From the moment he gets up, the American is at his work, and he is engaged in it till the hour of sleep. Pleasure is never permitted to interrupt his business; public affairs only have the right to occupy a few moments. Even meal-time is not for him a period of relaxation, in which his wearied mind seeks repose in the bosom of his friends; it is only a disagreeable interruption of business, an interruption to which he yields because it cannot be avoided, but which he abridges as much as possible.¹

One is tempted to comment on the modification in habits and customs that has taken place since this was written, but there is little reason to doubt that these observations fairly depict the spirit of the period.

The length of time people worked and the intensity of their work is another factor affecting the labor supply. As the preceding observations indicate, not only were the hours of work per day long but people began to work at a relatively earlier age than today. Just as in colonial days, children were put to work about the household, on the farm, or in the

¹ CHEVALIER, MICHAEL, "Society, Manners and Politics in the United States," Boston, 1839, p. 277 *ff.*

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shop almost as soon as they were capable of such work, for labor was much needed and the old Puritan spirit, though modified, still feared the evils of leisure and play. However, as the period progressed the introduction of free public schools and the development of a more adequate educational system enabled such as could afford it—and this group increased with the growth of wealth—to postpone the day when their children took up work in earnest. The hours of work among adults were typically long both in the case of independent workers such as the farmers and craftsmen as well as in that of those who worked for wages in the factories and elsewhere. From sunrise to sunset was common at the first of the century, though from about 1830 some of the skilled city artisans were able to secure a 10-hour day; after about 1850 factory workers were beginning to obtain a day of from 11 to 12 hours. As might be expected in view of such long hours, the pace at which people worked was considerably slower than it is today. Among the craftsmen a moderate pace prevailed and the chances to lay off for a brief rest were frequent; where power-driven machinery and factory methods were coming in, a faster and steadier rate of work was necessary. In the lower South the more enervating climate doubtless augmented by the debilitating effects of malaria and the hookworm (the existence of the latter and the causes of both being then unknown), tended to decrease both the hours and the pace of work.

As far as skill, technical knowledge, and general intelligence were a factor in the labor supply, this period brought a fair amount of progress. In the first place, however, the introduction of machinery much of which could be run by relatively unskilled labor resulted in what is sometimes spoken of as the transfer of thought, skill, and intelligence from the worker to the machine, and tended to reduce the demand for the more skilled artisans in some trades. Also, the system of training by apprenticeship, never very strongly entrenched in this country, was being further weakened during this period, partly through the introduction of machinery and in spite of the efforts made by some trades to prevent it. On the other hand, although immigration brought in a considerable number of skilled artisans that helped to meet the need for this type of labor, the bulk of the immigrants either went to the farms or supplied the common labor employed in mining, railroad or canal construction, and the factories. When it came to work that was slow and minute in character and required not only skill but patience, great care, and attention to detail or artistic finish, there were relatively few to be found who were either able or willing to undertake it. Haste, impatience, and a desire for quick results prevailed so that then as today such work was more apt to be done abroad.

The Development of Educational Institutions. In the development of educational institutions this period was notable for evolving and laying

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the basis of the main institutions upon which the present educational system of the country has been built up. During the Revolution education had been set back; in the period that followed up to about 1820 progress was slow. But from then on a great awakening as to the importance of general education occurred; statesmen, philanthropists, and workmen urged or demanded free public schools. Chiefly as a result of this demand, coming from reformers or the people rather than through paternalistic action on the part of the government, the state was impelled to provide for this need on an ever increasing scale, supplementing or taking over and broadening in scope one after another of the various activities theretofore carried on by private initiative or philanthropic organizations.

This awakening of interest in education was due to various causes. (1) In colonial times religious ideals had been the main factor in leading to such provision for general education as was then made. In the nineteenth century this factor was still an appreciable one, but the constitutional provision for religious freedom, the separation of church and state, and the great variety of religious beliefs that developed among the people eventually led to a demand that public education be nonsectarian in character. (2) The democratic basis of our political institutions made it obvious, especially where the franchise was being extended to a full manhood basis, that general education was essential for the success of the republic. (3) The democratic spirit of the people, the desire for greater equality of opportunity, made it appear intolerable that the less well-to-do should have to depend upon philanthropy or face the stigma attached to attending pauper schools to obtain anything so vital to their well-being as an education. The increased political power that came to this group with the widening of the franchise gave them a better chance to obtain what they desired.

The chief accomplishment of this period was the introduction of tax supported, nonsectarian, free public schools. The struggle to secure such schools in the period between 1825 and 1850 evoked bitter antagonisms, but by the latter date the idea had won general acceptance and, outside of the South, had been very widely carried into practice. From New England, where a beginning had been made in colonial times, the movement spread to New York and was more slowly accepted in the other Middle Atlantic states where charity and parochial schools prevailed. The people in the new states of the Northwest, aided by public land grants, adopted the idea almost from the first, particularly where the New England element in the population was strong. The laws passed in response to this demand were often permissive in character at the first, that is, towns and cities were allowed to vote whether taxes should be levied for the support of public elementary schools. In time the state laws tended to make the establishment of such schools compulsory. Very

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commonly some financial aid was given by the states. The use of state funds and local taxation increased the demand that the schools so maintained should be free from sectarian influence or control and led to cutting off such public grants as had formerly been made for denominational schools. From 1844, though not common until after 1860, the states began to adopt constitutional provisions prohibiting sectarian instruction in schools supported by state funds or by public taxes.

The control of the public schools was almost entirely in the hands of local authorities, chiefly those of the school districts, for the district system had spread from New England over most of the country during this period. Though the extension of state aid afforded a basis for some state control or supervision, the character and quality of the education provided varied greatly. The first state school official was appointed in New York in 1812 and the first real state board of education in Massachusetts in 1837. Horace Mann was the secretary of this board and he together with Henry Barnard took the lead in promoting educational progress during this period.

Progress in education was by no means confined to the public elementary schools which had been established in most states by 1850. In the larger places primary grades were being introduced in the public schools and a beginning was made in the establishment of public high schools. The first high school in the country was established in Boston in 1821 and the real beginning of the high-school system may be said to date from the Massachusetts law of 1827 which required the establishment of high schools in towns of 500 or more families. However, the extension of the high-school system was very slow during this period, the real growth coming after the Civil War, for such laws as were passed were generally permissive in character; the need for secondary education was in part met by the very rapid growth of the private or semipublic academy.

The first academies had been established in the latter half of the eighteenth century and offered a broader more practical group of studies than the rather aristocratic Latin grammar schools, chiefly designed to prepare men for college, which the academy before long displaced in popular favor. After about 1820 the growth of academies was very rapid; by 1850 there were over 6,000 in the country and throughout the period this institution dominated secondary education. Practically all charged tuition but also received support from private endowments, denominational groups, or the state; in the latter case they became subject to semipublic control. Many were designed for women but others, especially in the West, were coeducational. Out of the academies came the great number of teachers in the elementary schools, for normal schools, though started during this period, developed slowly and there were but 18 of

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them in existence in 1860, one-third being private and the rest state institutions.

The demand for higher education also led to a rapid growth of colleges and universities. It is estimated that in 1800 there were but 24 colleges in the country and that these had in all between 1,000 and 2,000 students; by 1860 the total number of colleges had risen to nearly 250. For the most part these colleges owed their origin to the activities of various religious denominations, as had been the case in colonial times. Though the purpose of training men for the ministry was much less emphasized than formerly, the spiritual and moral training of youth was nearly always prominent among their objectives. There was also a demand, particularly strong in the West, that the state should assume the function of providing a college education as well as that of the grade schools. It was thought that a state institution with a low tuition fee would be more democratic, less subject to purely denominational interests, and readier to meet the demand for a broader and more practical curriculum. In the West Congress adopted the policy of granting two townships for the purpose of a university on admitting the state to the Union. Many states adopted constitutional provisions for a state university; in some of the older states private institutions were in part or wholly taken over by the state. The growth of state universities in both number and size was slow throughout this period—there were 17 in 1860, all but one being located in the South and the West—but they provided a basis for a development that has since attained great importance.

Further progress in the field of higher learning was provided by the establishment, either within the universities or separately, of distinct schools for professional training in theology, law, medicine, technology, dentistry, and pharmacy. In addition women, to whom no college was open in 1800, now had colleges of their own available and, in the less conservative institutions of the West, coeducation was adopted.

Though the progress in the development of educational institutions which has been briefly sketched was remarkable and put this country ahead of any important nation of Europe with the exception of Germany as far as providing schooling for the masses was concerned, the numerous deficiencies that existed must not be overlooked. In quality there was much to be desired and only toward the end of this period did schools begin to draw extensively upon the better pedagogical methods evolved in Europe by such men as Pestalozzi. The facilities provided, particularly in the rural districts, were poor and for many practically inaccessible. In the South this was especially noticeable, and the Negro was practically excluded from the public school.

Furthermore, even when adequate schools were available, it did not follow that all parents either would or could send their children to them.

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Many a child was sent to work as soon as he was able to eke out the family income. The few child labor laws offered but ineffective restrictions and the first compulsory school attendance law was not passed until the Massachusetts law of 1852. How little schooling was received can be judged from the rough estimate that has been made that in 1860 the total number of days of school attendance of all grades enjoyed on an average by the people of this country in the course of their lifetime was only 434. Yet small as this was—less than three school years—it was five times the amount estimated to have been received in 1800. Whereas broad social objectives were the primary considerations back of the effort to educate the people, it is obvious that widespread and very important economic gains would result therefrom.

In the handicrafts during the colonial period the system of apprenticeship had served to provide both technical training and a little rudimentary education. During this period the changes that were undermining the apprenticeship system tended to lessen the opportunities for securing such training. As the small shop increased in size or was transformed into a factory, the number of apprentices increased and they ceased to live in the home of their employer as had commonly been the case in colonial times. Under these conditions it was no longer practicable for the employer to give the instruction in reading and writing or the moral training that had formerly been expected of him so that these elements generally disappeared from the apprentices' training. In addition, the introduction of machinery, combined with the tendency toward greater specialization of work, resulted in greatly narrowing the scope of the work that the apprentice was trained to do in any one trade. It was often possible for him to attain the skill necessary for reasonable proficiency in such a branch of the trade in very much less time than the period for which he was apprenticed—a period that commonly ran from five to seven years, not infrequently even longer, though there appears to have been some tendency to shorten it at this time. The net result of all this was that the apprenticeship system lost still more of its beneficial features and became more and more simply a device for employing cheap child labor. A recognition of this fact is shown in the increasing number of complaints from journeymen in different trades against the large number of apprentices employed and their demands that the number be limited. It was not until about 1850 that such action on the part of organized labor became general.

The Wages of Laborers. Although adequate statistical data concerning the condition of laborers during this period is lacking, the scattered facts available are sufficient to permit of some rough generalizations on the subject. In general the trend of money wages for common labor was upward during this period. It is stated that "after the beginning of the canal and railway building era, about 1820, the normal day's wage of

common labor, without board, seldom fell below 75 cents and ranged from that point to \$1.25, according to locality and season." After about 1850 common laborers generally obtained \$1 to \$1.25 a day. (See the chart on page 731.) In Massachusetts farm labor without board rose from about 50 cents around 1800 to \$1 a day by 1860. In the coal mines workers were paid between 80 cents and \$1.10 a day on the average during the period 1840-1860. The wages of the more skilled artisans and mechanics in the large cities were nearly double those received by common laborers and they advanced similarly from between \$1.25 and \$1.50 a day about 1820 to between \$1.50 and \$2 or even more by 1860. In the West wages were higher than in the East; they were lowest in the South. Wages also varied with the fluctuations in the business cycle. They fell in the general deflation after the War of 1812, rose again in the speculative boom of the thirties, dropped in the reaction which followed, and rose once more in the general prosperity of the fifties when the level attained was decidedly above that which prevailed at the beginning of the century.

The wages of women in the industrial occupations, which they began to enter at this period, were considerably below—usually between one-quarter and one-half below—those paid to men. Thus in the thirties seamstresses in the seaboard cities were earning between 25 and 35 cents a day, though in this occupation competition was particularly severe. At the same time the women workers in the New England textile mills were being paid from 35 to 50 cents a day, in a few cases somewhat more. The relatively low wages received by women were due in part to the small number of occupations then open to them combined with the fact that these occupations seldom required much skill, and in part to the fact that the women and young girls entering them often remained but a few years or else did not have to depend on their earnings for the entire support of a family. V. S. Clark has estimated that in this country the wages of unskilled labor were between one-third and one-half higher than in Great Britain; the difference was somewhat less in the case of skilled artisans, the latter in part explainable by a somewhat lower degree of skill.

Although the figures for money wages just given seem very low as compared with those of today, it must be remembered that the purchasing power of money was considerably greater than it is today. Whereas no satisfactory estimate of the cost of living is available for this period, some idea can be gathered from the fact that in the thirties board and lodging for men cost from \$1.75 to \$2.50 a week and for the women employed in the textile mills the cost was from \$1.25 to \$1.50 a week. There was some advance in the general price level between that date and 1860 but it was probably less than the advance in money wages and thus resulted in some increase in real wages during this period. The practice of paying factory hands or mine workers by orders on a general store usually

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owned by the employer, known as the "truck system," was fairly widespread and led to many protests on the part of the workers, partly because of the high prices charged for the goods so sold, and partly because the system not infrequently led to the worker's becoming heavily indebted at the store. This system was claimed to result practically in a reduction of the money wages of from 10 to 25 or more per cent.

It must also be remembered that in these times the number of things which the government undertook to provide freely for all and which today make up no small addition to the real income of the working class, such as provision for education, health, recreation, or the arts, was in those days very limited. One feature not infrequently accompanying the wages of common labor, especially that employed in railroad and canal construction or in crop harvesting, was a dole of whisky or rum. Thus we hear of the navvies of Pennsylvania getting a pint and a half of whisky a day distributed in nine doles, yet striking for more.

As far as we can now judge the wages received by laborers made possible a moderate standard of living, considering the standards prevalent at the time. Most laborers were able to provide themselves with what were then counted among the real necessities of life though not with refinements or luxuries; actual poverty and misery such as were common in Europe were relatively rare. The worst cases were found in the large cities chiefly of the Northern seaboard where the competition of immigrants and the existence of various semiparasitic industries reduced the earnings of some groups such as seamstresses below a subsistence level and drove many an immigrant to the poorhouse or dependence upon charity. Nonetheless the comments of both immigrants and foreign travelers upon conditions in this country leave no room for doubting that in general the standard of living of the laboring class was decidedly above that which prevailed in Europe.

In contributing to this result the chief factor was the abundance of natural resources relative to the laboring population. The cheapness of, and relatively easy access to, excellent farming land afforded an alternative opportunity to the laborer and compelled the employer to offer wages and conditions of work that were nearly as attractive. This possibility is pointed out by the Irish traveler, Thomas Mooney, who wrote home,

Remember that if you please, you can, as soon as you get into a regular employment, save the price of an acre and a half of the finest land in the world every week! and in less than a year you will have money enough to start to the west, and take up an eighty acre farm, which will be your own for ever.

It was partly because this opportunity was less available to some, such as women, spendthrifts, or the immigrant so inefficient or so burdened with a family it was impossible to save, that the low wages of such groups

are to be explained, for even the money to go west and start farming was not always obtainable. It seems probable that Western farm land was more important as providing an outlet for the sons of farmers and certain groups of immigrants, notably the Germans and Scandinavians, than for most laborers; but those who went west decreased the pressure on the Eastern labor markets.

The Condition of the Factory Workers. It was in the textile industry that the factory system was being most rapidly introduced. In connection with this industry we have the most information concerning the changes in the conditions under which the laborer worked. One characteristic of this industry was the relatively large number of women and children employed. In colonial times spinning and weaving had been carried on in the household. When the new inventions resulted in the transfer of this work to the factory, the workers who were free to do so followed it thither. This meant a great change in the conditions under which they labored.

In the textile mills of Massachusetts and northern New England most of the workers were drawn from the farmers' daughters of this region. The hours of work were long, generally from 12 to 14 including some allowance for meals, until about 1850 when between 11 and 12 was more common. There were complaints made that the work was too intense, especially as improvements and specialization of jobs led to an increase in the number of machines tended by the worker. Whether it was such as actually to undermine the health of the workers is difficult to ascertain. However, that it was extremely monotonous and involved much more physical strain than where the work was done under the leisurely, freer, and less specialized conditions that had prevailed in the household is obvious. Provisions for prevention of accidents and for healthful and sanitary conditions of work were generally neglected. Ventilation was particularly bad especially in winter. In this region many of the mill companies erected boardinghouses to accommodate their employees and evinced a decidedly paternalistic attitude in the way in which these houses were managed.

It might even be thought that the rules and regulations reflected rather more concern for the spiritual and moral than the physical well-being of these workers. But it must be remembered that in those days the importance of hygiene and sanitation was little recognized in the home as well as in the factory. Also it is to be noted that, although the men employed in these mills were generally permanent employees, the young women—for most of them were from sixteen to twenty-five years of age—seldom continued to work in the mills for more than a few years; at least this was true until the influx of immigrants about 1850 led to the farmers' daughters being displaced by foreign workers who were generally more permanent. That the conditions under which these young women worked,

all things considered, were not unattractive is best indicated by the numbers that sought employment there. Many regarded it as an opportunity to escape from the humdrum life of the farm, enjoy more freedom, obtain some of the advantages of city life, secure more education, and accumulate a little savings. The writer Lucy Larcom, who had been one of these factory mill workers herself, says, "For twenty years or more Lowell might have been looked upon as a rather select industrial school for young people. The girls there were just such girls as are knocking at the doors of young women's colleges today."

In the textile mills located in the region extending from Rhode Island southward through Pennsylvania, the condition of the factory workers was less favorable. The class of workers corresponding to the farmers' daughters was less in evidence, and the system of hiring workers by the family was common, which resulted in a large proportion of young children being employed. Also the mill boardinghouse was absent and there was less evidence of a paternalistic interest in the welfare of his workers on the part of the employer. Immigrants made up a larger proportion of the workers and the women were less frequently merely temporarily employed. In this region, particularly about Philadelphia, many textile workers continued to work in their homes or small shops under the domestic system on materials supplied by their employers.

Concerning labor conditions in branches of manufacturing outside of the textile industries we have much less information. The introduction of factory methods was slow. For the most part these industries were carried on by relatively small concerns where, in spite of the growing number of workers, the relationship between the employer and his employees continued to be fairly close. In some branches of manufacturing work was still carried on in small shops or materials were distributed to be worked up in the home. In many fields of work the conditions of labor showed little change from those of the colonial period.

Women and Children in Industry. Perhaps the greatest change in conditions of work affecting any large group of laborers occurred through the opening up of many employments outside of the home to women and children. The change that took place with the rise of the textile mills already described recurred on a smaller scale in many other branches of manufacturing. For the most part these changes did not mean the opening up of new employments to women, but rather a transfer of the place in which they did this work from the home to the factory or shop. As the household industry lost control of the production of many commodities, the women followed the work to the factory. In some industries, however, the introduction of machinery that did not require much strength to run or the development of specialized jobs of a similar type, most easily obtained under the factory organization, did open up new lines of work for

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both women and children. It has been estimated that in the thirties there were at least 100 different lines of work open to women; the Census for 1850 showed nearly double that number. This census indicated that at that date "87 men and 28 women out of every 1,000 persons of each sex in the population over ten years of age were employed in manufacturing industries." In 1860 out of a total of slightly over 1,300,000 employees in manufacturing industries returned by the census over one-fifth were women.

In fact, however, the employment of women in industry was highly concentrated. By far the larger portion of these women—over three-quarters in 1860—was living in the seaboard states from New Hampshire to Pennsylvania inclusive and over one-half of the total were in either the cotton mills or the manufacture of men's clothing. Outside of these two industries the largest numbers were employed in other branches of the textile industry, and the manufacture of boots and shoes, straw hats, ladies' clothing, millinery, and paper. Outside of the textile industry most of their work was carried on in small shops or their homes. The worst conditions existed in the clothing industry, especially in New York. There the wages were very low, often insufficient to support a single individual, and the sweatshop and overcrowded tenement where the work was often done began to appear at this time. As the census figures do not classify the children of either sex separately, it is impossible to tell the number of young girls employed in manufacturing but it is evident that there must have been many and that they often began work at a tender age. Children of eight or ten years of age were fairly common in the cotton mills; sometimes they were not over six. Only in the last decade or two of the period was any effort made to exclude the youngest from the factories or to limit the long hours of their work; even then, these laws were seldom effectively enforced.

It was doubtless in the case of these children that the shift of work from the home to the workshop or factory brought the most undesirable results. Though there is a tendency to assume that conditions in the home were better than was probably the case, the work which they did there seldom involved the physical strain that accompanied factory work and the separation from constant parental supervision and the earlier contact with the world which factory work necessitated had results much more serious than in the case of adults. In the case of women the opening up of the numerous opportunities for work outside of the household, though under conditions far from ideal, was not without some advantages. The most important was the increased freedom of action that resulted from the opportunity to earn their own living and secure economic independence, for economic independence is one of the most essential factors in self-development. Though the scope of the employments open in other

lines of work as well as in manufacturing was still very narrow and the wages so low as to leave little above the outlay for necessities for self-development, this change at least meant that women had an alternative to the circumscribed work and life at home. The fact that so many chose the alternative is the best proof that this development meant progress for the sex.

Changes in the Economic Position of the Laborer. The tendency toward division of labor and specialization of functions was one of the most fundamental features in the changes taking place in the organization of industry. It was inevitable that this should have an important reaction on the economic position of the laborer. Specialization tended to increase the physical productive capacity of the laborer; but most of the gain therefrom took the form of lower prices for the consumer in which, of course, the laborer shared. Specialization not only increased the monotony and strain of work but often tended to decrease the amount of training and skill required which resulted in making it easier for a worker to shift from one job to another, thus increasing the mobility of labor. At the same time it increased the competition between groups of laborers in the same or different occupations.

This same tendency toward specialization led to increased functional specialization. It has been said that in colonial times outside of the slaves there scarcely existed a distinct laboring class in the sense of a group of workers who remained hired employees throughout their lives. The apprentice became a journeyman and the journeyman ordinarily became a master craftsman and as such performed the functions of laborer, employer, capitalist, merchant, and entrepreneur all at once. As time went on and the small craft shop grew to a large one or was transformed into a factory, these functions were specialized and came to be carried on by separate groups of individuals. As the scale upon which business enterprises were carried on increased, the proportion of employees to employers rose, the amount of capital necessary to carry on an enterprise became larger than most laborers could ever hope to obtain, and more and more workers were destined to remain hired employees throughout their lives. Thus the gap between the employer and his employees was widened and the basis was laid for a distinct laboring class. The change came gradually; there were many occupations only slightly affected during this period and the full consequences of the change were scarcely appreciated until the last of the century, but it was fraught with momentous consequences both economic and social.

One result was to weaken the economic position of the individual laborer in bargaining with an employer for the sale of his services. Where he employed many, the employer was less dependent upon any one laborer; he could wait more easily than the laborer who seldom had

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savings sufficient to permit prolonged idleness. Moreover, with the increased specialization of labor, it was easier for the employer to train new men for a job. Finally, the improvements in transportation and communication made it easier for the employer to secure labor from other localities or even from other countries than had formerly been the case. Although it is also true that this same development made it easier for the laborer to move elsewhere in case he was unable to secure satisfactory terms of employment, various factors such as the expense involved or family ties closed this to many.

Another development reacting upon the laborer, also largely a product of the better facilities for transportation and communication, was the increasing severity of competition. As previously suggested this arose not only from the greater mobility of laborers but also from the widening of the market for the products of labor. Thus we find evidence during this period of employers in one city advertising for workers in the papers of other cities and the workers evidently moving about from one place to another in search of better wages with greater freedom than ever before. Similarly as markets widened the products turned out by the laborers in one city began to compete in the market with those turned out in an ever widening circle in other cities. Hence, when an employer found that his labor costs were higher than those of a competitor in some other place so that he was being undersold in the market, he was very likely to try all the harder to reduce wages. Although it is obvious that such competition did not tend to injure the laboring class as a whole, since it helped to raise wages in some localities as well as to depress them in others, it resulted rather in greater uniformity and standardization of wages throughout the country. In the sections where laborers suffered from this competition, much discontent was aroused which led to efforts to counteract this effect.

The Beginnings of the Organized Labor Movement. The reactions upon the economic position of the worker just described furnish the chief explanation for efforts which certain groups of workers began to make for the purpose of improving their economic position by the greater strength obtainable through concerted organized action. This led in the decade of the twenties to what has been called the beginning of the labor movement in this country.

At the beginning the efforts to organize the workers were largely confined to the cities where competition was most severe and where the number of workers in a given trade was large enough to give the organization some semblance of power. It was among the more skilled artisans of the trades rather than among the factory workers that the efforts to organize were most common and most successful. Thus the workers in the various building trades, the printers, the tailors, the boot makers, the

shoemakers, the coopers, the shipyard workers, the comb makers, the cabinetmakers, and the weavers were those among whom the movement was strongest. This was owing in part to the greater intelligence of these groups but still more to the fact that they were permanent followers of the trade and, being in a trade where a certain amount of skill that took time to acquire was necessary, they were less subject to competition from other workers and less likely to be replaced. At the beginning, though artisans took the lead in the movement, sharp economic class lines were not drawn and frequently small employers, farmers, and social reformers united with the laborer; the group represented rather the interests of the poor, though labor predominated. This interest was reflected in the more common demands that were advanced. Though higher wages and shorter hours were generally at the forefront, these demands included free tax-supported public schools, free public land, the abolition of imprisonment for debt, modification of the militia system, mechanics' lien laws, and the elimination of what were looked upon as monopolies in the field of banking.

A period of temporarily advancing prices served to crystallize the current discontent and led in the years 1824-1825 to a series of strikes for higher wages and shorter hours. The strike of the Boston carpenters at this time, though unsuccessful, was the first important effort for the 10-hour day. This momentary outbreak of strikes was preliminary to the activities of 1827, which Prof. Commons calls the real beginning of the American labor movement; it marked the assumption of a more aggressive attitude on the part of labor since such unions as existed theretofore had had more of the character of benefit societies. In that year the journeymen carpenters of Philadelphia, who had previously been working from sunrise to sunset, struck for a 10-hour day and were joined by the painters, glaziers, and bricklayers. They organized the Mechanics' Union of Trade Associations which eventually included fifteen associations. Thus different trades first began to unite to further their common interests. The following year the *Mechanics' Free Press*, the first labor paper, was started, and the Workingmen's Party was organized to enter local politics and fight for greater social and political equality. In this year the first recorded strike of factory operators occurred at Paterson, N. J., where the militia was called out to maintain the peace.

The movement soon spread to New York, New England, and the Ohio Valley cities. In New York after successful opposition to the efforts to abolish the 10-hour day, internal dissension arose over varying programs advocated by such radical reformers as Skidmore, Evans, Owen, and Frances Wright; after entering state and local politics, the movement went to pieces. In Boston after another failure in an attempt to secure a 10-hour day for carpenters in 1830, there was organized the New England

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Association of Farmers, Mechanics, and Other Workingmen which, though always weak, held conventions for three years before it disappeared. As the name indicates, the membership, which included textile workers and farmers as well as craftsmen, was heterogeneous and soon the economic demands of the workers became subordinate to political issues.

The disintegration that succeeded the entrance of these weak and unstable organizations into politics brought a temporary lull in the labor movement. The rapid advance in prices during the speculative boom that soon swept over the country caused another series of strikes and renewed efforts at organization in the years 1833-1836. Local unions that had been abandoned were revived, new unions were organized in smaller cities, and efforts were made to form unions in many trades where they had not existed before. The discontent was such that even unorganized workers often went on a strike. Records exist of at least 173 strikes during these years. In some of the seaboard cities the growth of the movement was so marked that it has been estimated that the membership of the unions made up a larger proportion of the workers than at any time since.

Progress in the organization of labor was made not only by starting local unions in separate trades as formerly but by getting these local unions from different trades to unite in a city association following the example set in Philadelphia in 1827. More than a dozen such city central unions had sprung into existence by 1836, and were found not only in the cities along the coast but also in Albany, Pittsburgh, Louisville, and Cincinnati. In 1833 Ely Moore, the first president of the New York union, was elected to Congress. Through united action, contributions to one another's support, starting labor papers, and some political power, greater success was obtained.

Another step forward was the organization of national trade unions, a move made necessary by the widening of the market, the growing competition, and the efforts to check this competition and secure greater standardization of wages and working conditions in a given trade. Since only a few trades attempted this, such as the cordwainers, printers, carpenters, comb makers, and hand loom weavers, the result was a weak powerless organization which did little more than hold a convention where discussion rather than action dominated. A final step towards organization was taken in the calling of a series of national conventions of the National Trades' Union initiated in 1834 by the General Trades' Union of New York. At the convention of 1836 there were 35 delegates and it was claimed that the number of organized workingmen then numbered 300,000. The conventions served primarily to bring labor leaders from different cities together and promote agitation, but half a century was to pass before an effective national organization was secured.

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In 1837 the speculative boom came to a sudden end in the disastrous panic that swept over the country and was followed by a long period of depression. In the years of hard times and extensive unemployment that ensued labor was put on the defensive and, except for a few strong local unions, labor organizations were for the time being practically wiped out of existence. This, however, did not mean that the activities of the preceding decade had been in vain for, although some of the gains made had to be given up during the years immediately following, there were many that were permanent.

The same was true of various other demands of labor. By this period the militia system had been generally modified so that it bore less heavily upon the workingman, mechanics' lien laws had been passed to protect his earned wages, and imprisonment for debt had been generally abolished. Although less substantial results had been secured in the cases of the demand for free land and free public schools at this date, progress had been made and the agitation started aided by social reformers soon yielded abundant fruit. Another gain came through the establishment of the legality of trade unions.

One of the best proofs of the growing power of organized labor at this time was the fact that the employers began to form associations primarily designed to oppose the unions. In this respect they differed from the earlier masters' organizations, which were concerned chiefly in furthering the more general interests of the trade. At the same time employers began to appeal to the courts to stop various activities of the unions, particularly the efforts made to secure the closed shop. In several of the earlier cases such action on the part of the unions was condemned by the courts as a conspiracy—the cases hence becoming known as “the conspiracy cases”—and doubts as to the legality of unions were thus created. In 1842 a Massachusetts decision held that unions were not illegal *per se* though they might use illegal methods, and declared that a strike for a closed shop if peacefully conducted was not illegal. From then on the legal right of labor to organize was generally acknowledged.

Finally, labor had gained through its experiences and even its failures. There was a growing recognition of the advantages of common action and the need for an organization that was broad in its scope; there was a growing sense of power, furthered by the extension of franchise rights. Even though most of the attempts of laborers to enter politics ended disastrously in dissension and disintegration of their organizations, still the older political parties were forced to recognize the growing influence of the laboring class and frequently were impelled to grant some concessions to their demands, all of which was but one phase of the democratic spirit of the period.

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The Agitation of the Forties. The prolonged economic depression that followed the panic of 1837 had passed through the worst stage by 1843 but it was not until 1850 that a period of general prosperity returned. This depression brought trying times for all classes: business and trading profits were small or replaced by losses, the prices of farm products were abnormally low, and laborers suffered from reduced wages and unemployment. Widespread discontent and social unrest prevailed and, as is always the case under such circumstances, the desire to secure relief from these difficulties led to a general agitation in favor of all sorts of economic and social reforms. The labor movement of the forties was largely colored by these circumstances and has consequently been called the "hot air period" of the movement.

There were three main general reform movements with which the labor movement became involved at this time. One, known as the "associationist movement," was advocating the organization of associations or phalanxes along the lines suggested by the Frenchman Fourier. These essentially communistic groups were designed to harmonize all conflicting individual or class interests and secure "universal justice" by working and living together. Their chief advocate was Albert Brisbane, and Horace Greeley became greatly interested in them. In all some forty phalanxes were organized mostly in the early forties. Brook Farm near Boston, with which a number of New England's literary men became associated, was the most famous, but all were small and generally short-lived, the varied interests of the members and the individualistic spirit of the country proving unfavorable to their development. Though differing considerably in detail there were some renewed efforts to establish communities of the paternalistic socialism type advocated by Robert Owen, such as had been started at New Harmony, Ind., in 1826. These efforts also brought little in the way of results.

The second reform movement was led by George H. Evans who had long been an advocate of agrarianism and more particularly of equal distribution of land. Though at this period his program was less radical he emphasized the class struggle and was very active in his efforts to secure the support of laborers, knowing their interest in free land. But he was so little interested in the reforms that the workers considered more pressing that they turned to other leaders, though his agitation helped to augment the demand for the Homestead law.

The third reform movement to appeal to labor was cooperation. It was urged that where other methods failed the workers could help themselves by organizing cooperative associations both for producing goods and for the purchase of goods that they consumed. Many disillusioned associationists turned to this idea. The consumers' cooperative societies were chiefly confined to New England, where over 400 were started, but

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producers' cooperative societies were organized by craftsmen in a number of the large cities of the country. Few of either type endured for any appreciable length of time; many failed through lack of capital, inefficient management, or the frequent migration of the members, and the results were so slight that the workers lost interest in the movement.

Since the few labor organizations that managed to maintain a precarious existence during these years were constantly being entangled by one or another of the agitators who sought their support to further some broad social reform, no small portion of their limited resources and energy was often dissipated in vain endeavors. Still some progress was made in furthering the reforms more directly and immediately beneficial to labor. Chief among these at this time was the shorter working day. In the agitation carried on with this in view the workers received important support from many social reformers.

The most active agitation was in New England and centered in Massachusetts where efforts were directed toward securing a law to limit the hours of labor for women and children in the factories. The New England Working Men's Association was organized in 1844 to push the movement and held a series of conventions in that and following years; but its activities were soon diverted to pushing various other social reforms. In 1845 the women in the Lowell factories formed an organization and a committee of the Massachusetts legislature made a report on the hours of labor but opposed legislation on the subject. The first state 10-hour law was enacted by New Hampshire in 1847. This act fixed 10 hours as the legal day's work; the effect was practically nullified by the provision that the worker, who found he had little choice in the matter, could contract for longer hours.

Other states followed this example though varying the detailed provision. The Maine act of 1848 went further in prohibiting the employment of children under sixteen for more than 10 hours a day. The Pennsylvania act of the same year applied only to half a dozen branches of manufacturing. The Ohio 10-hour law of 1852 had the usual special contract exception, but prohibited the employment of children under fourteen for a longer period. A similar Rhode Island act of 1853 prohibited the employment of children from twelve to fifteen years of age for more than 11 hours. The same year California made 10 hours a legal day. In New York legislative action was limited to a 10-hour law for public work in the absence of contracts. In Massachusetts there was no legislative enactment though the continued agitation led to voluntary reductions to an 11-hour working day in the factories in 1853. Connecticut passed a 10-hour law for mechanical and factory labor with the contract clause in 1855. The Southern states took no action aside from an unimportant law in Georgia. Except for the cases where there was an absolute prohibition of long hours

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for children, this legislation had little direct effect; yet indirectly the accompanying agitation, by helping to arouse public opinion to the existing evils, did hasten the introduction of shorter working hours.

Aside from the shorter working-day movement this period brought little in the form of direct gain to the laboring class as such. Not much was accomplished in broadening the scope or increasing the power of labor organizations; few unions were fortunate enough to maintain any semblance of power, though some that had disintegrated in the worst years of depression were revived after 1842. Strikes occurred, often among unorganized workers, but they were mainly defensive rather than aggressive in character. About 1850 industrial congresses were organized in a number of the large cities which included representatives of the labor unions as well as the various social reformers. But the latter dominated and the congresses became chiefly concerned with political activities designed to further one or another social reform rather than the immediate interests of the workers. This result was fairly typical of such political activities as labor organizations engaged in at this time. The support of labor was used by the social reformers or the old political parties to further their own ends; the immediate needs of labor received scant attention or support. In the reaction against such repeated disappointments and failures, organized labor in the following decade cast aside programs of sweeping social reform, limited the membership in its organizations to the worker, and concentrated its activities on demands that would more immediately improve his position.

The Beginning of Modern Unionism in the Fifties. The results of this reaction were evident in the decade of the fifties that followed. The recovery from the long depression combined with the stimulus of the gold discoveries brought a period of marked prosperity which greatly aided the movement. At the same time the rising cost of living and the competition of the abnormally large influx of immigrant labor gave an added incentive for laborers to organize. Under these favoring conditions labor became aggressive and marked progress was made not only in organizing the workers but in immediately improving their condition.

This progress was due not only to more favorable economic conditions but also to more practical and businesslike action on the part of the unions. By this period the workers were beginning to accept as inevitable the growth of capitalistic organization in industry with its altered relationship of employer and employee; they therefore abandoned the hope of returning to the conditions of the craft workshops and forsook the programs of sweeping reforms that proved so impracticable. Recognition of their changed position led the workers to confine membership in their organizations to laborers, and the necessities of the situation as well as past experience led to the adoption of the most practical measures for

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strengthening the unions and trying to enforce their demands. Initiation fees, dues, and strike benefit funds were collected upon a much larger scale than ever before; regulations limiting the number of apprentices were generally demanded; the importance of securing a standard minimum wage and fixing the time and method of wage payments was recognized; the closed shop was vigorously contended for; collective bargaining between the organizations representing labor and employers began to appear; and the offensive use of the boycott and strike was frequent. In short the objectives, methods, and practices of organized labor had by this time become such as are common today.

Higher wages and shorter hours were the chief objectives of the labor movement at this time. The rapid advance in prices after 1852 led to numerous strikes in 1853-1854 most of which were successful. It is stated that by that time there was scarcely a trade in the Eastern cities without a union and wages were from 20 to 25 per cent above the level of 1850. Although many of these unions went to pieces later, especially after the sharp financial panic of 1857, still there was no such disastrous loss of strength or members as after the crash of 1837. The struggle for shorter working hours had so far succeeded that by this time, though somewhat longer hours commonly prevailed in mills and factories, the 10-hour day was general among the crafts in the larger cities; after this decade it was an 8-hour rather than a 10-hour day that the workers began to demand.

Progress in the organization of labor during the decade was notable, not only for the organization of local unions in many new trades but also for the establishment of the first national trade unions that proved permanent in character. The printers, whose earlier attempt at such a national organization had proved short-lived, held a national convention in 1850 and formed a national Typographical Union in 1852. The Hat Finishers' National Association was organized in 1854 and the National Union of Iron Moulders in 1859. There were also a number of other trades where national organizations were formed or conventions held but they soon disappeared. In no instance, unless we except the typographers, did the national organizations exercise any appreciable power; not until after the Civil War did they become a factor of importance in the labor movement. At this period the various local unions, almost entirely confined to the more skilled trades in the larger cities and exercising purely local influence, made up the real strength of the labor movement. It was in providing this foundation, upon which the succeeding generation built, together with the agitation and experience accompanying this effort, that the main contribution of this period to the labor movement consisted.

CHAPTER XXIII

MARKETS AND TRADE, DOMESTIC AND FOREIGN, 1815-1860

Introduction. The general conditions that determine the character and extent of a country's trade were outlined in the chapter dealing with colonial trade and commerce. The most important changes among these conditions in the period 1815-1860 were those that occurred in the field of transportation and communication, particularly the introduction of the railroad, which have already been described. As was to be expected, these led to an enormous expansion of trade and commerce both domestic and foreign, though the growth of the former was much more marked than the growth of the latter, resulting in a decrease in the relative importance of foreign trade. The larger volume of trade created a demand for a rapid expansion of marketing facilities. This growth made it economically advantageous to introduce far more division of labor and specialization in the marketing organization than had existed theretofore. The resulting greater economies in the marketing process in turn stimulated the growth of trade. These two tendencies—the growth in the volume of trade and the introduction of more specialized marketing methods—were the outstanding features in this branch of economic activity during this period.

It should be noted, however, that changes were taking place with such rapidity that even in a given section of the country a decade or two might witness almost revolutionary alterations in the prevailing marketing organization. Furthermore, there were marked variations in the conditions that determined trade in different sections of the country so that there existed at the same time all the gradations in marketing methods from that of the isolated frontier with its relatively self-sufficing household economy to that of the large commercial seaports connected by railroads and steamships with most of the world. These marked variations and rapid changes must be kept in mind in reading the account that follows. Finally, since data bearing on the history of domestic trade and the evolution of marketing methods are very scant and have as yet received little detailed study, at best only rather rough and none-too-certain generalizations concerning this phase of our economic history are possible.

Trade on the Frontier. Along the westward-moving frontier of settlement two fairly distinct methods of carrying on trade may be said to have existed. In the regions where the first settlers were primarily engaged in

general farming and had no cheap water transportation to a market, such trade as existed was similar in method to that which had prevailed along the frontier at the end of the colonial period. These settlers carried with them into the wilderness such supplies as they could not easily produce themselves. Most of their needs were provided for by their own efforts but there were ordinarily a few things such as ammunition, metal utensils and tools, medicinal drugs, paper, salt, and perhaps tea, coffee, and sugar that had to be obtained from the outside world. To secure these a few products were gathered, commonly those having considerable value in proportion to their weight or bulk, such as furs, potash and pearlash, whisky, or something peculiar to the vicinity, and a few times a year these were carried to the nearest locality where a general store was to be found and traded for such things as the frontier household could not produce. If the frontier settler was fortunate enough to be located near water transportation to a market, he was likely to raise a larger amount of products for sale; more specialization was possible and he could buy more goods to supply his own needs. In such cases his surplus products were carried to the nearest waterway and sold to a trader or storekeeper and the proceeds used to secure a stock of supplies for the coming year and perhaps provide a small surplus for paying debts or for savings. Sometimes, as in the Ohio Valley, a farmer might himself transport his goods to the distant city markets, such as Cincinnati, St. Louis, or even New Orleans, either because no country trader was available or in the hope of getting better prices.

The second form of frontier trade was conducted on a larger scale and over longer distances. It developed in the trans-Mississippi region between the larger settlements on the Mississippi or Missouri rivers and the Far West. The trade that sprang up between Missouri and Santa Fe and later extended to southern California and into Mexico was of this character. Though never large in volume it was carried on chiefly by individuals or partnerships functioning as wholesale distributors. The trade with the Indians in the Rocky Mountain region as well as in Oregon territory, chiefly for furs, fell largely into the hands of companies operating on an extensive scale. When settlements sprang up in the interior mining region, they were supplied in the main by merchants operating from San Francisco, St. Louis, or Missouri River points, but outside of specie there was little return traffic.

In the case of this Far West trade, frontier conditions continued to shape its methods for a longer period than in the region to the eastward where the stage of frontier life frequently passed in a decade or two as population poured in, towns and cities arose, better transportation facilities were introduced, and a more elaborate marketing organization developed. There were, however, a few less favored sections that the emi-

grant tide passed by which retained much of the primitive economic life of the frontier. Although the largest of these was in the Appalachian highlands of the South, similar examples of stagnant, backwoods groups of settlers were scattered throughout the country.

The Trade of Rural Sections. As frontier conditions passed away in one after another of the agricultural sections of the country, trade increased in volume, more and more of it became sectional or national in its scope, and a more extensive and specialized organization was developed for handling it. In the regions where general farming predominated the farmer generally produced a considerable variety of products for sale though the quantity of each was relatively small. These might be disposed of at the country store or in the near-by towns and cities either to a variety of storekeepers and dealers or direct to consumers. The greater portion of these commodities such as meat and dairy products, fruits, vegetables, and firewood were consumed in the locality. Where the commodities were raw materials destined to be worked up into manufactures, they could sometimes be disposed of direct to local manufacturers such as lumber mills, gristmills, slaughterhouses, tanneries, breweries, and distilleries. If such an outlet was not available, there were local dealers, usually specializing in one or more of these products, who made a business of buying them and at intervals sending them on to larger dealers or manufacturers at more distant points. With the cash or store credits obtained from these sources the farmer purchased such commodities or services as he needed.

In the smaller towns would be found stores dealing in meat and groceries, provisions, dry goods and notions, hardware, druggists' supplies, stationery and books, and wearing apparel, which together with the local craftsmen and professional men were able to supply most of the needs of the farmers and the townsmen. Not to be forgotten was the peddler who with his Connecticut tinware, his dry goods, clocks, and various "Yankee notions," became a common sight in the rural districts. The activities of this itinerant trader were rapidly extended during this period from New England into the South and the West, and the Census of 1860 returned nearly 17,000 peddlers. Occasionally the more prosperous townsmen, very rarely the farmer, made a trip to the cities to secure things not kept in stock in such a town. Many local storekeepers dealing in supplies from the cities made annual or semiannual trips to market to replenish their stock. In time, apparently starting in the thirties, the city wholesale distributors or manufacturers began to send out traveling salesmen to push their wares and thus put local storekeepers in closer touch with the sources of their supplies. By 1860 there were about 1,000 such.

In the agricultural sections where specialization in a few great staple products was customary, much of the local trade did not differ very appreciably in methods or character from that which has just been

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described. But in the handling of the great staples a somewhat more elaborate market organization developed, for these entered into trade that was national or international in extent. In the grain and livestock-raising region of the West primary markets developed at convenient points for water transportation to which these products were brought by the farmers from the surrounding region, often long distances. As much depended upon the farmer's success in selling his one big cash crop, he naturally wished to attend to the business himself. At these markets were specialized dealers in grain who bought the farmer's crop, generally paying cash, and reshipped it in large quantities. As railroads spread to this region grain was carried by the farmer to the nearest station and there sold to the small dealers who sprang up at such points or else shipped direct to a dealer in the primary markets.

In the Southern cotton belt the small growers, until railroads became available, hauled their cotton overland, sometimes 150 miles, to the nearest navigable water. There it was sold to factors or to merchants who had often advanced money on the crop and from whom the grower secured such supplies of the outside world as he required. From these interior gathering points the cotton was shipped to the seaports where it was disposed of through brokers to agents representing domestic and foreign manufacturers, or more commonly to the large dealers in cotton. The larger plantation owners often shipped their crop to the seaboard markets direct and sometimes consigned it to Northern or foreign commission houses. The Southern factors paid for the cotton by bills drawn on Northern cotton houses who in turn drew on England against shipments or borrowed from local banks. The Northern bills so obtained by the Southern merchants and factors provided the funds to pay for manufactured goods and other supplies, both domestic and foreign, which the South secured from the North.

Trade in the Large Cities. The great expansion of trade at this time was best reflected in the growth of the larger cities, for it still remained true that trade and the economic activities related thereto were the chief factors in the growth of the great urban centers. Naturally, too, it was in such centers that the most extensive and elaborate organization for carrying on trade developed. In these commercial cities there was of course a large volume of purely local trade not unlike that in small cities and towns, but its size made greater specialization possible. More and more of the food from the neighboring farming region passed through the hands of wholesale distributors or commission houses before it reached the retail stores or the booths of retailers in the public fish, meat, or produce markets. The retail trade in general was much more specialized than elsewhere but a new development in large-scale retailing was to be seen, chiefly in the dry-goods stores, where a departmental organization

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was introduced, notably in the case of A. T. Stewart in New York, out of which, in the following period, came the modern department store. It is supposed that it was in this store that the practice of plainly marking goods with their price, called the "one-price system," was first adopted.

However, the wholesale trade with its widespread ramifications gave these cities their great importance. In the organization of this trade marked developments were noticeable at this period. Brokers, commission houses, jobbers, and wholesale distributing houses, each specializing in some one commodity or closely related group of commodities, both foreign and domestic, came into existence in all lines where the volume of trade was large. The system of sale by auction, where goods sent on consignment or owned by wholesale dealers in imported or domestic merchandise were disposed of to smaller distributors and retailers, became a common feature in the seaboard cities during the twenties, and was employed for a much larger variety of goods than theretofore. There was considerable opposition to the system from domestic manufacturers who complained that the foreign goods, particularly British manufactures, so sold abnormally depressed prices and made domestic competition difficult. Though the general business condition rather than the system was primarily responsible for this and the opposition dwindled with more prosperous times after 1830, some restrictions were adopted, chiefly in the form of taxes. In some lines of trade the auction system became a regular feature; in others the development of a more permanent and steady marketing organization led to its abandonment, much of this work being taken over by brokers or commission men.

The New England textile manufacturers, though sometimes using auction sales, depended chiefly for disposing of their products upon wholesale commission houses or agents, many of which were closely allied financially with the mill owners and often advanced money to them. Originally located chiefly in New England, after 1846 a growing proportion of this business was transferred to New York City. That city also became the center of the cotton trade of the country; most of the financing connected with supplying the export trade and no small portion of that with the New England mills were arranged there. Boston and New Orleans were subsidiary markets. The wool trade was centered in Boston where a well-organized market was maintained after about 1830 that soon became national in scope. The wholesale trade connected with the boot and shoe industry was also centered there though as this grew in extent wholesale distributing and jobbing houses were established in New York, Philadelphia, and Western and Southern points.

The trade in wheat and flour, aside from that which was local, had originally developed in what were essentially regional markets in the main wheat-growing sections. The grain was brought in by the local

dealers or the farmers themselves to the nearest important seaport, Philadelphia, New York, and Baltimore being in the lead about 1800. There the wheat or flour was distributed for local consumption or exported. With the completion of the Erie Canal and the rise of wheat growing in the Genesee Valley the wheat trade at New York became still more important. Until about 1840 most of the surplus wheat of the West was sent down the river to the New Orleans market. What was not required in the South was sent by sea to Atlantic coast ports or exported. As the region bordering on the Great Lakes was settled and the construction of railroads provided feeders to this waterway, the lake ports rose to importance as points for gathering western wheat and a steadily increasing proportion of this crop was shipped eastward instead of down the Mississippi. The receipts at Buffalo first surpassed those at New Orleans as early as 1838; at this point the first grain elevator in the country was erected in 1843, a device quickly adopted at other terminal points.

By the fifties Chicago had secured a clear lead among the primary markets and an extensive marketing organization had been developed. A new and important feature in this organization was the founding of the Board of Trade which began operations in 1848. At first grain was sold by sample, but soon inspection and grading were introduced to secure greater standardization and facilitate trading. As the volume of trading rapidly increased in the Eastern seaports, exchanges for dealing in grain were soon organized in those places as well. The introduction of the telegraph brought these different trading centers into immediate communication. By 1860 the wheat trade had the most highly developed commodity marketing organization in the country.

The Main Currents of Domestic Trade. The factors that determined the course of domestic trade and the commodities entering into it require only brief notice for they are the same as those that are fundamental in governing all trade. (1) The most important was the relative cost of producing a commodity in different sections of the market area for a given article—the law of comparative costs. (2) There was the cost of transporting and marketing a commodity which set limits to the geographical extent of the market for commodities. (3) There were the artificial restrictions, usually in the form of taxes or legislation such as tariff duties, which might check a trade that otherwise would have developed.

The main factors affecting costs of production have already been touched upon in previous chapters. It is obvious that the innumerable improvements that decreased costs, notably in manufacturing, tended to widen the market. A like tendency, and one of much greater influence in the case of the more bulky commodities, came from the remarkable improvements in transportation and the more efficient marketing meth-

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ods. Finally, in the greatly widened market thus secured there were practically no artificial barriers set up to hinder commerce between the states. Taking into consideration the population of the country and its wealth, we may say that by 1860 the United States afforded one of the greatest free-trade domestic markets to be found in any country in the world, though the fact that the population was scattered over such a large area somewhat offset these advantages. This expansion of the market promoted a geographical specialization in industries that was nearly national in scope; on this basis the great volume of intersectional trade developed.

This intersectional trade developed between three main regions, distinguished by the growing tendency toward specialization in their chief economic activities—the Northeast, the West, and the South. The Northeast specializing in manufacturing and the import trade sent such products to the West and South in increasing volume as better transportation facilities became available, first by the waterways along the coast or the rivers and canals, and later by the railroads. Previous to about 1840 the West sent relatively few products to the East; of those sent some were shipped directly eastward and others by way of New Orleans and the coast. More were disposed of in the South or exported. Thereafter a steadily increasing proportion of the staples of the West, chiefly wheat, flour, corn, packed meats, and livestock, went to the East both to supply that growing market and the export trade to Europe. By the decade of the fifties the trade between the East and West had become the most important intersectional trade in the country.

In the South the border states sent a few specialties such as tobacco or hemp to the East but their surplus foodstuffs went to the cotton plantations. From the Far South but little went to the West—some sugar, a little cotton, and a few imported products chiefly from the tropics. Their chief shipment to the North was cotton; the only other items worth mentioning were sugar and tobacco. By far the larger portion of their cotton was sent to Europe, generally direct from Southern ports; upon the proceeds from this great staple, the South depended chiefly to meet the balances due in payment for the supplies, both domestic and foreign, obtained from the other sections of the country.

Looking back over this period, we may see that from about 1825, aided by the construction of the canals, the introduction of the steamboat and the railroad, the improvements in communications, and the developing market organization, the markets for an ever increasing number of commodities were becoming national in scope. Greater specialization followed, not only within the country as a whole but within different sections and different small communities. Trade absorbed an increasing portion of the economic activities of the people and made its contribution

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to progress through the economies arising from a more nearly nationwide specialization.

The Organization of Foreign Commerce. In the field of foreign commerce the developments during this period, both in organization and volume, were less marked than in the field of domestic commerce. This was due in part to the fact that in earlier periods foreign commerce had been extensive and a fairly elaborate organization for carrying it on had already been evolved. Another reason was that the improvements in transportation at this time were less significant for sea-borne trade than for inland trade. Finally, it would appear that the volume of foreign commerce failed to increase at anything like the ratio that domestic commerce increased during these years. In fact it remained almost stationary up to about 1845, though from then on to 1860 its growth was rapid.

The foreign commerce of the country was chiefly in the hands of American and English merchant traders operating on a large scale and mainly on their own account. The English merchant had a branch house or an agent in this country and the American merchant had similar connections abroad: in England or on the Continent more commonly an agent; in Calcutta and Canton usually a branch house. Often an American firm served as agent for the British exporter and an English firm for the American exporter, and usually these houses were engaged in both the export and import trade. In the early years such specialization as existed was based on the trade with a given country as England, Holland, China, or India. As the volume of trade increased, greater specialization developed, chiefly in the great staples of the trade with Great Britain such as cotton, grain, and dry goods. The rapid growth of British manufactures and the necessity of finding a market for their output led many manufacturers after 1815 to ship their goods on consignment to commission houses or to establish their own agencies in the United States. This competition proved severe for the American importers of such goods so that not a few ceased importing on their own account and acted as commission houses for the English exporter or went out of business. Although American importers became somewhat more prominent in the handling of British manufactures after about 1830, it appears probable that throughout this period British concerns were dominant in this trade. No small factor in this result was the assistance making possible long terms of credit that was secured from English financial institutions.

On the other hand, the import trade in products of the Far East was almost entirely in the hands of American merchants who established agencies in Canton and Calcutta. In the early years this trade was carried on chiefly from Massachusetts but later a considerable portion was shifted to New York. These goods, as well as those of European

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origin, were generally sold in large quantities to jobbers who in turn disposed of them in smaller and more varied lots to the retail dealers throughout the country.

In the export trade cotton was by far the most important commodity and a specialized organization developed for handling it. Though the actual shipments were made largely from Southern ports, New York became the headquarters of the chief houses, both domestic and foreign, that engaged in the trade in this country; Liverpool was the dominant European market. The greater portion of the exporting was done by cotton merchants, either American firms or agents of British firms, very seldom by planters. Though in time some English manufacturers began to buy through their own agents in this country, this involved not only more working capital but a greater risk from fluctuations in prices, which they generally preferred to avoid. Ordinarily, therefore, they bought their supplies in England through dealers and later through brokers who in turn commonly secured their cotton from the importing merchants or commission houses; these latter sold that bought by their American branches and agents or that sent them on consignment by American exporters. Thus the cotton trade came to have the largest and most elaborate organization of any branch of our foreign commerce.

Developments in Ocean Transportation. It was previously stated that the changes in transportation methods during this period were less important in their effects upon ocean trade than upon inland trade. The changes that came with the introduction of the steamship were destined to revolutionize ocean transportation, but it was not until the middle of this period that the first regular use of ocean steamships began; even in 1860 only a small portion of the ocean-borne commerce was carried by steamers. This was still the period of the wooden sailing vessel; it included the days of the sailer's greatest glory, but closes with a shadow forecasting its ultimate fate. During the earlier years of this period the chief changes in ship construction consisted in some increase in the size of the vessels built. By 1840 sailing vessels of 600 to 800 tons burden, three or four times the size of those common before the Revolution, were frequently constructed, and some of the clipper ships that soon followed were double or triple this size. This greatly helped in reducing costs and by the early forties transatlantic freight rates were a third to a half lower than about 1820.

In 1843 was built the first of the so-called "clipper" ships with concave lines and greater length in proportion to the beam. The success attending this innovation was such that over 250 vessels were constructed in the dozen succeeding years, marking what is called the clipper-ship period in ship construction. These vessels made a remarkable record for speed, owing in no small measure to very efficient management, and were exten-

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sively employed in the rush to California and the trade with the Far East. The trip to California took from 90 to 110 days. Their cost was not low but their speed—436 nautical miles a day was the record—enabled them to secure the cream of the ocean traffic, until this passed to the still faster and more reliable steamship.

In 1838 steamships began to provide regular ocean service. The two British vessels that commenced their trips across the Atlantic in that year were wooden ships driven by paddle wheels and made the trip in a little over two weeks. The successful completion in 1844 of an English steamship built of iron and using a screw propeller wrought a revolution in naval architecture. The substitution of iron for wood, first in the hull and then in the framework of ships, decreased the weight of the vessel about a fourth and at the same time made possible the construction of larger and stronger ships.

The chief difficulty in the economic use of steamships for carrying cargo was the large amount of space required for coal, a difficulty further increased by the lack of coaling stations throughout the world. Although the introduction of the compound engine about 1854 reduced the coal requirement about one-half, it remained for later improvements in marine engineering to overcome this obstacle completely. Thus, even at the end of this period, it was supposed that the steamship could be economically employed only for the transport of passengers, the mail, and the less bulky and more valuable cargoes. The sailing vessel was then, and for several decades continued to be, the chief carrier of the ocean trade.

In addition to the technological progress in shipbuilding, sea-borne trade gained through the reduction of various risks attendant upon its pursuit. Relatively unknown seas such as the South Pacific were explored, coast lines and harbors were better charted, and the lighthouse service was expanded. By this period the trade winds were well known and the safest and quickest routes for sailing vessels were definitely established. Piracy was eliminated after about 1820 and the period was marked by the absence of any wars that appreciably affected ocean commerce. The decreased risks resulting from these improvements and the advance in shipbuilding made lower marine-insurance rates possible, and the passing of marine insurance into the hands of large and firmly established companies gave added stability to that business.

Another development of this period was seen in the organization of ocean shipping, which came with the rise of regular lines, first of sailing vessels known as packet lines and then of steamships. Two things mainly contributed to bring this about: (1) the growing volume of trade along the main routes combined with the need for regular and dependable shipping facilities for passengers, the mails, and goods; (2) the increasing size and growing cost of ships, particularly steamships, necessitating such

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large investments that it was beyond the resources of the old merchant traders or shipowning partnerships and could be financed only by a large company. There were still many branches of trade, notably that with the Far East, where the merchant traders employed their own ships, not infrequently a considerable fleet, in carrying their own merchandise. The tramp, a real public carrier sailing hither and thither in search of cargoes, was at this time found nearly everywhere and carried the bulk of the ocean freight. But these new lines steadily grew in importance, securing first the passenger traffic and the mail and then a constantly increasing proportion of the more valuable and less bulky freight.

The first regular ocean line in American ports was the Black Ball Line which in 1818 commenced a monthly service between New York and Liverpool and at once proved successful. In 1821 the Red Star Line was started. Soon others were organized to engage in the coastwise as well as in the ocean trade. The packet lines, mostly owned by American partnerships, grew rapidly and reached the peak of their prosperity about 1840; in the fifties they lost ground before the competition of the faster and more reliable steamship. In the forties they were making the east-bound trip across the Atlantic in 22 days and the westbound trip in 33 days; by 1851 the steamship had cut the latter to around 10 days. The steamship in the early forties could make six trips to the sailing vessel's three, and this was a great factor in its success.

The first important line of transatlantic steamships, the English Cunard Line, began its service in 1840, aided by a mail subsidy from the British government. This stimulated Americans to action and Congress beginning in 1845 passed several laws granting subsidies to American steamship lines engaged in carrying the mail. With this aid lines were established running to Bremen, Le Havre, Liverpool, Havana, the Isthmus of Panama, and along the Pacific coast. For this service the government paid out about \$14 million up to 1858, when the subsidies were stopped, partly as a result of the financial failure of the important Collins Line (one of their boats had made the trip to Liverpool in less than 10 days) after the loss of two vessels, and partly owing to opposition from various sources—chiefly shipping competitors—to such aid as a form of special privilege. However, a fundamental difficulty in the development of American steamship lines was the fact that this country could not build iron steamships as cheaply as England could, and we could not buy English ships since our navigation laws prohibited the operation of foreign-built ships under the American flag.

The Navigation Laws. Another factor in the growth of American shipping was the Navigation Laws. In the previous period the country had adopted a policy of protecting American shipping by means of discriminating tonnage and tariff duties. At the close of the War of 1812 this

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policy was reversed as far as the foreign trade was concerned. In its place a policy of reciprocity was adopted under which this country offered to admit vessels of any foreign nation carrying products from that country to American ports on the same conditions as American vessels, provided the foreign nation made a similar concession to American vessels entering its ports. This act of Congress in March, 1815, was strengthened in 1817 by an act prohibiting the importation of goods in vessels engaged in the indirect trade where the vessels belonged to a country that did not admit American vessels engaged in the indirect trade.

Finally, in 1828 Congress definitely offered reciprocal treatment in the indirect foreign trade. The abolition in 1830 of all tonnage duties, except in the case of ships of a nation not granting reciprocal treatment, made these offers all the more attractive, and such duties were not reimposed until 1862. In the case of the coastwise trade, however, Congress by the act of 1817 specifically excluded foreign-built or -owned vessels, though practically they were already excluded by discriminatory tonnage duties. This prohibition giving American shipping a monopoly of the coastwise trade has remained practically unaltered ever since. This act also required that two-thirds of the crew be Americans, but there seems to have been considerable evasion of the law as American wages were relatively high.

The chief motive back of this adoption of a policy of reciprocity for shipping in the case of the United States was the feeling that American ships could compete successfully with those of other countries provided they were on an equal footing. Ships cost less to build in the United States than in England and, despite the higher wages paid, the cost of operation was generally lower owing to the use of smaller, though hard-driven, crews, the lower cost of provisions, and the superior efficiency with which the ships were sailed and which made faster and more frequent trips possible. Furthermore, the experience of shippers during the Napoleonic wars had whetted their appetite for a larger share in the carrying trade of the world. The abnormal development of our merchant marine and shipbuilding industry had made a larger field of operations all the more desirable. This policy—directly in contrast with that underlying the navigation laws in force for nearly two centuries—marked the beginning of a new era in the shipping policy of the world. Slowly but steadily most European nations began to modify the severity of their navigation laws; the freedom of movement of vessels engaged in international trade was greatly increased; and a marked economy in the use of the world's shipping resulted therefrom.

In the United States this legislation led to a prolonged series of negotiations and commercial treaties involving constant bargaining and sometimes severe retaliatory action designed to force concessions. By

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1829 treaties had been made with the leading commercial nations of Europe, granting reciprocal treatment of shipping engaged in the direct trade. Full reciprocity covering the indirect as well as the direct trade was secured more slowly. Particular difficulty was experienced in securing full freedom in the trade with the British West Indies, once so important a branch of our carrying trade, much of which was based on indirect trade. Finally in 1830, after negotiations had come to such a deadlock that this trade was prohibited to vessels of both countries, all branches were open to American ships except that between British possessions. This restriction, which considerably hampered American shipping, according to the British view, was similar to the United States prohibition of foreign vessels in the coastwise trade. It continued in force until England abolished her navigation laws in 1849. By the fifties full reciprocity had been arranged with all the important trading nations of Europe and many of the Latin-American countries as well.

The Growth of the Merchant Marine. The changes in the shipbuilding industry and the navigation laws, combined with the development of the country's commerce, were the chief factors affecting the growth of our merchant marine. As has been seen, that marine had been abnormally stimulated during the period of the Napoleonic wars up to about 1808. The severe restrictions that followed and then the War of 1812 nearly drove American shipping, except such as was turned to privateering, from the high seas. In 1816, allowing for previous losses, the total merchant marine of the country was probably somewhat under 1,200,000 tons. (See the charts in Chap. XXXVII.) Of this total roughly one-half was made up of registered vessels engaged in the foreign trade; a slightly smaller amount consisted of enrolled and licensed vessels engaged in domestic trade; and the remainder, some 50,000 tons, was employed in the fisheries. Although from then on until after 1830 there was little change in the total tonnage, that portion engaged in the fisheries almost tripled. Thereafter the tonnage of the vessels engaged in the coastwise, river, and Great Lakes trade steadily advanced, regularly exceeding in amount the tonnage in the foreign trade, and by 1860 had mounted to nearly 2,650,000 tons. The growth of this shipping in a field where foreign ships were excluded was solely a product of the expansion of domestic commerce and the demand for water transportation that arose therefrom. Much the greater portion of this tonnage was employed in the coastwise trade.

These years also witnessed a steady growth in the tonnage employed in the fisheries; in fact this reached the highest point in history in the prosperous decade of the fifties. The tonnage engaged in the whale fishery reached the highest figure, almost 200,000 tons, in 1858; in the case of the cod and mackerel fisheries the maximum tonnage, but a trifle above that of the whalers, was attained in 1862. The tonnage engaged in the

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foreign trade began to increase again after 1830 but the growth was slow until after 1845 when it had reached 900,000 tons. Then with the building of the clipper ships and the increase in trade came a sudden spurt that raised this tonnage to nearly 2,350,000 in 1855 and almost 2,500,000 in 1861—a figure which was not again equaled for over 50 years. Through this advance the total merchant marine of the country reached 5,540,000 tons in 1861, a total destined to remain unsurpassed until 1902. Thus when the period ended slightly less than half of the total tonnage was engaged in the foreign trade. Of this total less than 900,000 tons was propelled by steam, but barely one-ninth of this was employed in foreign trade.

Throughout this period there was a keen rivalry in shipping between the United States and Great Britain. In 1815 the British merchant marine had been double that of the United States, but the rapid increase in American ships after 1845 brought the total merchant marine of the United States in 1860 to a point almost equal to that of Great Britain and

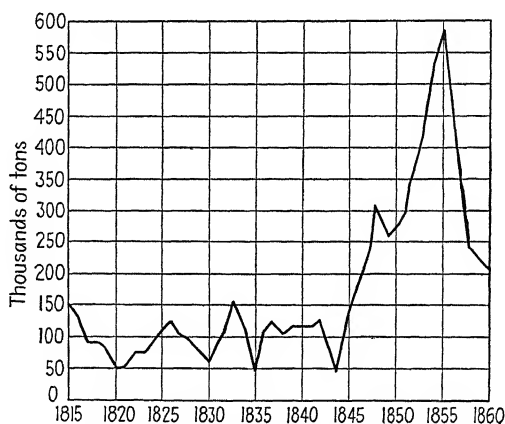


FIG. 20.—Tonnage of ships built in the United States, 1815–1860.

her colonies. At the time this aroused considerable alarm in England and was the basis for no small amount of chauvinistic oratory in the United States. Both proved premature and lacking in adequate analysis of existing tendencies. In the first place, something over one-half of the American shipping was engaged in domestic trade where the competition of foreign vessels was absolutely excluded. In the second place, the ship-building industry in the United States, with the possible exception of the clipper-ship period from 1846 to 1857, was not keeping pace with the growth of the world's shipping.

From 1816 until 1846 the tonnage of the sailing vessels built remained practically stationary, fluctuating around a figure somewhat below 100,000 tons a year. During the next dozen years the average output was

tripled, the maximum of over 500,000 tons being recorded in 1855. But foreign countries took up the construction of clipper ships as well, and the trade in which the American ships were most successful was already beginning to pass to the iron steamship in the construction of which no country could then compete with Great Britain. However, in 1860, the steam tonnage constituted less than a tenth of the world's merchant shipping. It is not without significance that throughout this period the tonnage of sailing vessels sold to foreign countries amounted to only about one-tenth of the tonnage constructed.

Finally, there remained the most significant fact that the American merchant marine engaged in carrying our own foreign trade was not keeping pace with the growth of that trade. In the decade 1821-1830 American ships carried approximately 90 per cent of the total value of our imports and exports by sea. This figure has never been equaled either before or since, though closely approached under the abnormal conditions during the Napoleonic wars. Even in this decade the high percentage attained was partly a product of unusual conditions, for the volume of trade was small and the controversy with Great Britain over the laws governing the carrying trade with the British West Indies led to regulations that at times excluded British shipping from such trade as was permitted with American ports. Thereafter this percentage showed a fairly regular and steady decline until in 1860 our ships were carrying only two-thirds of the value of our foreign trade. A more accurate measure of the proportion of American shipping engaged in this trade is provided by the figures for the tonnage of vessels entering and clearing in the foreign trade, as shown on the chart on page 787. For the decade beginning in 1821 American vessels made up 88 per cent of the total; then came a sudden drop, most marked in the trade with British North America. After 1832 American shipping made up a proportion that fluctuated around two-thirds of the total. Compared with the preceding, these figures indicate that after 1830 American shipping was less unsuccessful in keeping its hold on the more valuable cargo than on the bulky freight, but that towards the end this also was slipping away, presumably to foreign steamships. Of the foreign tonnage that entered and cleared American ports in 1860 four-fifths was British; nearly half of the remainder was German.

One element in this trend was the fact that during this period the section of our foreign trade that grew most rapidly was that with northern Europe. In the carrying trade with this region the United States faced its most severe competition from other carriers, chiefly England, the German states, and Scandinavia. In most of the other branches of its carrying trade American ships were far more predominant. How much American shipping was employed in that portion of the world's trade

that did not touch at American ports is uncertain, but it has been estimated at one-fifth of the registered tonnage. The very fact that American ships were steadily losing ground before the competition of foreign shipping, even in our own foreign trade, would indicate that the percentage must have been small and is the most significant fact in the history of the period. Although it was still true that the American merchant marine ranked second in the carrying trade of the world and still had more than its proportionate share of that commerce (assuming 50 per cent of the tonnage carrying our foreign trade to measure that proportion), it is clear that the trend of developments during this period boded ill for the future. Although not always so regarded, these developments make this period mark the real beginning of the decline. However, the brilliant but temporary outburst of activity during the clipper-ship period proved so dazzling that the significant facts were generally lost to sight.

The more fundamental reasons underlying this were various. There was growing competition from cheap wooden shipping built in the countries bordering on the Baltic or in British North America, as well as Great Britain's marked superiority in nautical engineering and the construction of iron steamships. There was our own navigation law which prohibited our buying and employing these ships under the American flag. There were innumerable new opportunities opening up for the very profitable employment of capital in this country in other lines. Finally, it may be noted that, although relative advantages in the cheap construction of wooden ships combined with navigation laws and efficient management had been most important factors in the growth of our merchant marine in earlier times, these were now passing away. After all the greatest triumphs of American shipping during this period were probably chiefly due to the intelligence, daring, and efficiency with which the sailing vessels were handled. With the introduction of the steamship we have only another case of the transfer of skill and intelligence to machinery. Thereby most of this remaining advantage was lost—as the course of events in the period that followed made only too clear.

The Growth of Foreign Trade. The history of our foreign commerce during this period is illustrated by the chart on page 796, though it must be remembered that changes in the price level tend to exaggerate the fluctuations in the physical volume of trade. The end of the War of 1812 brought a momentary quick advance in the value of exports and imports, only to be followed after the panic of 1818 by a decade of comparative quiet. (See the charts in Chap. XXXVIII.) The boom of the thirties brought a rapid increase which was checked by the panic of 1837. The decline continued through the first half of the forties, though still leaving the value of both imports and exports about a third greater than in the twenties. From 1846, the growth was rapid, stimulated by general pros-

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perity and rising prices till in the half decade ending in 1860 the average annual value of exports was \$294 million and of imports over \$320 million. Both figures were over four times greater than those for the decade of the twenties and included a very much smaller proportion of foreign commodities reexported. The amount of foreign goods included in the exports, so important an item during the Napoleonic wars, remained practically stationary for the period as a whole and fluctuated around \$20 million a year, indicating a steady loss relatively in this branch of the carrying trade. A glance at the chart on page 796 shows that throughout this period, except for a few years during periods of depression, the imports exceeded the exports in value. This produced an unfavorable balance which tended to increase in amount as time went on.

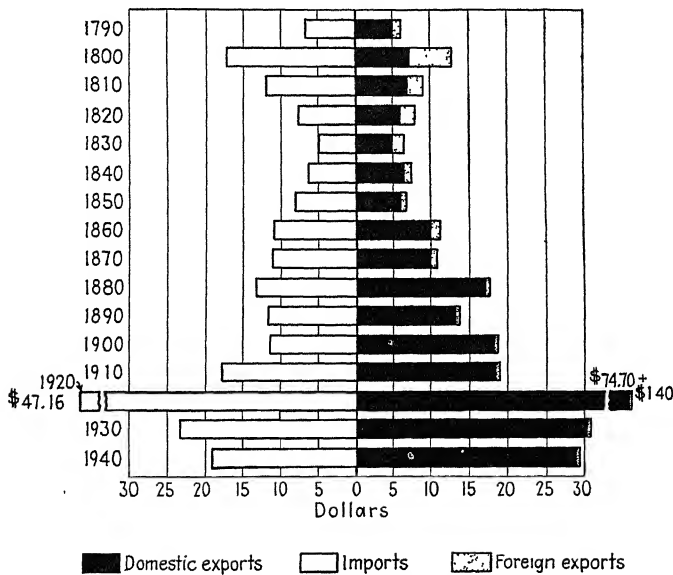


FIG. 21.—Per capita exports and imports since 1790.

A most significant fact is brought out by the above chart showing the per capita value of our foreign trade at this time. This shows that between 1818 and about 1850 the annual value of our total foreign trade was fluctuating around \$12 per capita, a figure much below that of any other period since 1789. Though here again allowances must be made for changes in the price level and the decreasing importance of the reexport trade, this would indicate that during these years foreign trade was a relatively less important factor in the economic life of the country than at any other time. Certainly it was less important than at any period since and, though no statistical basis of comparison is available for the colonial period, it is improbable that foreign trade was not a more vital factor in

the country's growth in those days, particularly during the eighteenth century, than during this portion of the nineteenth century. This fact is one of the reasons for the statement that at this time the United States turned its back upon Europe, faced to the West, and became absorbed in the development of its own resources.

The Commodities Entering into Foreign Trade. In the case of exports the most striking development of this period was the growth in the shipments of cotton. Previous to 1820 they had never reached 100 million pounds; in 1860 over 1,700 million pounds was exported. In the decade of the twenties cotton took the predominant position in the export trade formerly occupied by breadstuffs and tobacco. In 1860 the exports, valued at over \$200 million, made up nearly two-thirds of the value of all exports. Probably not even tobacco at the height of its prominence in colonial times was so important a factor in the country's export trade; certainly never since has any single commodity attained such predominance. Well might the South proclaim "Cotton is King"! Yet such dependence on one commodity created a precarious situation as the Civil War soon disclosed.

On the other hand the former great staples of the South lost all importance in the export trade. Indigo disappeared, rice remained stationary, and tobacco leaf though doubling in value amounted to but \$15 million in 1860, less than a twentieth of the total exports. Next to cotton in importance came the exports of foodstuffs, among which wheat, flour, and pork products took the lead. However, the value of the exports of these products remained practically stationary until about 1846. Though the growth was very rapid thereafter, their total value in 1860 was only about \$50 million, less than one-sixth of all exports. Throughout this period the various products of agriculture made up a fairly constant proportion of four-fifths of the value of all commodities exported. The products of the mines, the forests, and the fisheries together with those classified as miscellaneous were never important. Though there was some absolute growth, their aggregate fluctuated around 7 per cent of the total value and tended downward. (See the charts on pages 798 and 803.)

The remainder consisted of manufactured goods, which by the end of the period made up about one-eighth of the total. It is significant that this group, though still small, showed a very great relative increase during this period. Manufactures of cotton were much the most important and those of iron next; others were chiefly products only slightly worked up.

In the case of imported commodities this period brought less striking changes than among the exports. Finished manufactures fairly regularly made up slightly more than half of the total value of imports. Among this group textiles, chiefly wool, silk, and cotton, were far in the lead; iron and steel products made up the only other single item of importance. Manu-

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factures for further use in manufacturing contributed about an eighth of total imports. The proportion of the total consisting of foodstuffs fluctuated between 25 and 30 per cent; tropical and semitropical products such as sugar, coffee, tea, molasses, wines, and liquor were predominant. Perhaps the most significant change was the growing importance of crude materials for use in manufacturing. Though these made up but an eighth of the total at the end of the period, their growth reflected the rising importance of our manufacturing industries. Hides, skins, and wool were the chief items in this group.

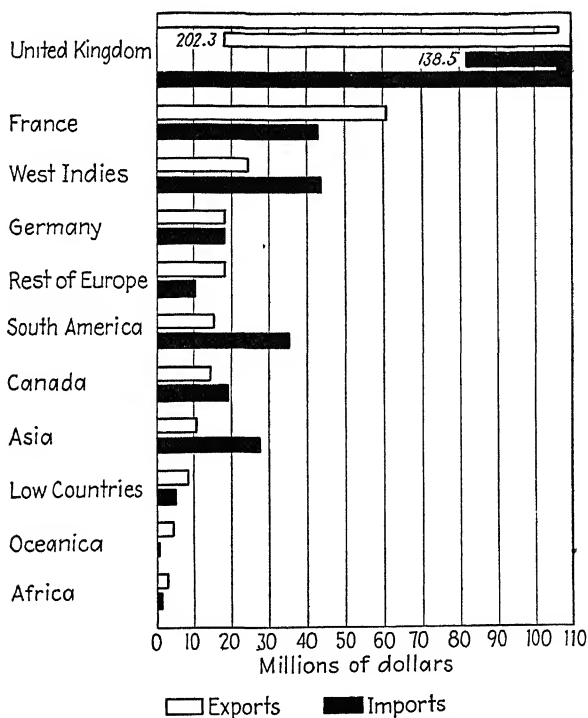


FIG. 22.—Imports from and exports to chief countries or continents, 1860.

The Direction of Foreign Trade. The chief change in the direction taken by foreign trade during this period was the decline in the importance of the trade with the West Indies. The rise of the beet-sugar industry in Europe and cane-sugar growing in the United States and the Far East, the declining fertility of the islands and the abolition of slavery in the British and the French West Indies, all contributed to this result in most of the islands. Cuba was the chief exception and that island, previously very backward, began to develop more rapidly under a more liberal Spanish rule. Soon it absorbed the bulk of our West Indian trade,

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for the commerce with the British, French, and Dutch islands either remained nearly stationary or declined. Though the growth of the Cuban trade prevented an absolute decline for the group as a whole, it may be said that after about 1830 these islands ceased to be the important factor in our foreign trade that they had been theretofore.

Much the greater portion of our foreign trade was with Europe, that continent taking about three-quarters of all exports and furnishing nearly two-thirds of all imports. Though most of the European trade still continued to be with Great Britain this period witnessed considerable growth in the direct trade with the continent, chiefly with France and the German states. The other changes of note were: the growth in the trade with

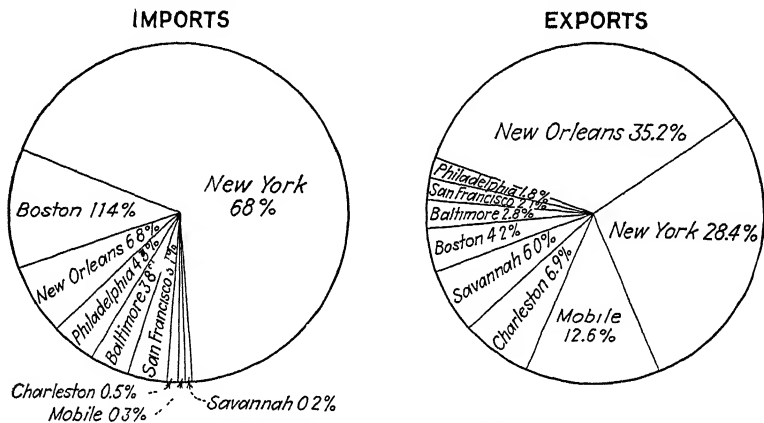


FIG. 23.—Imports and exports of commodities by chief ports, 1860 (excluding gold and silver).

Canada, especially after the reciprocity treaty; a marked relative increase in the trade with South American countries following their attainment of independence; the expansion of the China trade; and the beginning of a small trade with Australia and South Africa. The relative importance of the trade with different continents is indicated by the chart on page 441.

The developments in transportation and the changes in the character of commodities entering into foreign trade were chiefly responsible for the shifts in the seaport cities through which this trade was carried on. There were two very striking changes during this period. The first was the growth in importance in the export trade of the Southern cotton ports. In 1860, excluding specie and bullion practically all of which was shipped from New York, the value of exports from New Orleans exceeded that of any other port, though New York was a fairly close second. Next in order, though far behind, came the ports of Mobile, Charleston, and Savannah. After them came Boston, Baltimore, San Francisco, and Philadelphia.

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The second change was the strikingly preeminent position attained by New York among the rival Atlantic coast ports. Its success in the export trade as compared with its former great rivals, Philadelphia and Boston, has just been indicated. In the import trade it became even more predominant, and in 1860 about two-thirds of the total value of all imports into the country was entered at that port. Boston was a poor second in this trade and New Orleans third, followed by Philadelphia, Baltimore, and San Francisco in order. The great supremacy among the commercial cities of the country which New York definitely secured for herself during this period was chiefly due to the favorable connections with the West, its excellent harbor, and its location as a distributing center for the markets of the country. Philadelphia was the city that lost most relatively, owing in part to the lack of these advantages and in part to the nearness of its rivals.

The International Balance of Trade and Indebtedness and the Movement of the Precious Metals. It has already been pointed out that during this period the general balance of trade was against the United States, there being only a few scattered years in periods of business depression when the balance momentarily swung in our favor. In the trade with Europe the balance was unfavorable; the trade with the United Kingdom contributed the greater portion of this balance, though only a few countries did not make some contribution. In the case of the West Indies the trade with most of the islands gave a favorable balance, but this situation was reversed in the trade with Haiti and the Spanish islands. As the latter increased and the former remained nearly stationary, the West India trade as a whole became unfavorable. The South American trade and that with the Far East were also unfavorable. The trade with Mexico and British North America was favorable. (See the chart on page 441.)

The foreign trade was the biggest item in the balance of international indebtedness that determined the international movement of the precious metals. We might expect that with the balance of trade against the country there would be a net outflow of the precious metals; in fact, up to the California gold discovery, gold and silver were coming into the country. After that date there was a heavy net outflow. To explain these results it is necessary to examine other factors—the so-called “invisible” items—entering into the balance of indebtedness. For this purpose the period may be divided into two parts at the point when net imports of the precious metals ceased and regular exports first appeared—say 1850.

During the first period, covering the years 1821–1849 inclusive, the total excess of imports over exports amounted to about \$150 million.¹

¹ The following is based on the figures given in C. J. Bullock, J. H. Williams, and R. S. Tucker, “The Balance of Trade of the United States,” *Review of Economic Statistics*, Cambridge, 1919, vol. I, p. 215.

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Though up to 1837 the total accumulated unfavorable balance had been somewhat greater, this had been reduced by a slightly favorable balance during the dozen years following. Even larger in amount, however, was one of the invisible items, the interest on foreign capital invested in the United States estimated as totaling about \$224 million for the period. Together these two items made up much the greater portion of the total on the debit side of the account of the United States with the rest of the world. The remainder consisted of various minor items the most important among them being the expenses of Americans traveling abroad. (See the chart on page 807.)

Of the items that showed a balance on the credit side of the account the earnings of the American merchant marine in carrying goods for foreigners was much the largest, the total for the period being roughly estimated at \$450 million. The only other important item on this side was the net increase in the amount of foreign capital invested in the United States, possibly some \$170 million in amount. It was chiefly because the size of these two items brought the total credits above the debits that the net flow of the precious metals, amounting to \$72 million for the period, was into the United States. Thus was secured a most important contribution to the metallic circulating medium of the country.

This inflow of the precious metals was the net result of varied movements. Throughout the period there was a very regular outflow, chiefly of silver, in connection with the trade of the Far East. Although specie and bullion were being imported from the western coast of South America, they were being exported to countries along the east coast. At times, too, there were considerable exports to Europe, chiefly to England and France. Europe, however, was the main source of the imports, the greater portion presumably consisting of gold. Next in importance were the imports from Mexico, doubtless for the most part the output of that country's silver mines. Though far less important than formerly the West Indies also continued to be a source of supplies of the precious metals, in spite of the unfavorable balance of trade, and a small amount came in from Canada.

The first period in the history of our balance of international indebtedness may be said to have ended in 1849. It had been characterized by a generally unfavorable balance of trade and an inflow of the precious metals. The second period, which began in 1850 and really lasted until 1874, was marked by a still greater unfavorable balance of trade but a heavy outflow of the precious metals. Though we are here concerned with only the first decade of this period, it is desirable to understand the reasons that led to this change.

As is to be expected, the immediate causes arose out of the opening up of the gold mines of California and the enormous output that followed.

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This stimulated the recovery from the depression and helped to usher in a period of general prosperity; prices rose and imports increased much more rapidly than exports. The result was an enormous increase in the unfavorable balance of trade, the total for the years 1850–1860 inclusive amounting to over \$384 million. At the same time the rising volume of interest charges on foreign investments in the country and the growth of American travel abroad increased the debt due foreign nations. The resulting total was so great that, although it is estimated that nearly \$200 million of new foreign capital was invested here and that the net credit from the earnings of our growing merchant marine amounted to nearly \$250 million for the period, their total now fell far short of equaling the foreign indebtedness and gold had to be sent out to meet the balance. The net exportation of the precious metals for these years was \$430 million. The only important change in the general direction of specie movements was in the case of Europe that now began to receive gold from the United States instead of sending it out to this country.

CHAPTER XXIV

FINANCIAL INSTITUTIONS—MONEY AND BANKING

Introduction. Obviously the economic progress of the country during the period that we have been describing must have necessitated a marked development of our financial institutions. As capital funds accumulated and as business enterprises became larger in size and trade grew in importance, an expansion and improvement of the conditions and institutions for promoting savings, for aiding those needing capital and credit, and for providing the facilities required in the financial transactions involved were absolutely essential if economic progress was not to be seriously handicapped. The efforts made after the establishment of the new government in 1789 to overcome some of the defects and supply some of the deficiencies which had characterized the financial institutions of colonial times have already been described in the account of the period from 1789 to 1815.

The changes during the following period down to 1860 were in the main along lines already laid down in the preceding period. In part these changes were due to efforts to eliminate abuses and defects that experience showed were necessary; in part they were designed to meet new needs arising out of the country's rapid economic growth. Both remedial measures and innovations reflect ideals which throughout the country's history have exerted no small measure of influence upon our financial legislation—the strong dislike for anything that appeared likely to develop into monopolistic “money power” and the even stronger desire for cheap money and credit.

The Coinage and Circulating Medium. We have seen that during the preceding period the establishment of the mint and the commencement of coinage had begun to provide the country with coins of domestic origin, though their amount was small and insufficient for general use. This scarcity of domestic coin, combined with long established habits, led to a fairly widespread use of the English pounds, shillings, and pence as the money of account in trade. In spite of the resulting inconvenience, this practice was continued in some sections well into the nineteenth century. The deficiency was made up in part by foreign coins but chiefly by paper bank notes. The history of the coinage during the period under review can best be understood by dividing it into three parts: (1) extending to the Coinage Act of 1834, (2) continuing to the opening up of the

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California gold mines, and (3) covering the effects that followed that event.

Economically the years from 1816 to 1834 are really a continuation of the preceding period for the dominating factor determining the coinage remained substantially unchanged. From 1816 to 1833 inclusive, not much more than \$6 million in gold and \$27 million in silver were coined. Practically no silver was mined in the country at this time; most of this metal was obtained from Mexico. The gold was presumably the product of domestic mines. The relatively large coinage of silver as compared with gold was due to the fact that the commercial ratio of silver to gold fluctuated around 15½ to 1 at this time. Consequently, the coinage ratio of 15 to 1 overvalued silver and undervalued gold, and discouraged the coinage of the latter under the principle of Gresham's law. Since the resulting scarcity of gold coin was considered undesirable, Congress in 1834 changed the coinage ratio to 16 to 1 by reducing the weight of the gold coins. This overvalued gold for the definite purpose of attracting that metal to the mint and keeping it in circulation. Three years later, when the act of 1837 fixed the fineness of both gold and silver coins at nine-tenths pure metal, the result was a slight alteration in the coinage ratio, which then became 15.988 to 1. This ratio, except in the case of the subsidiary silver coins, remained unchanged for nearly a century and, though not quite accurately, is still generally spoken of as being 16 to 1.

The coinage act of 1834 being based on a well-recognized economic law at once had the desired effect, for the amount of gold brought to the mint to be coined showed a decided growth. The rate of output of the domestic gold mines increased somewhat at this period, but the total

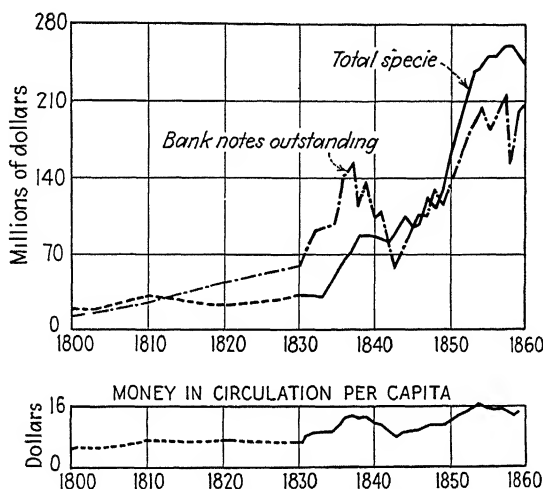


FIG. 24.—Estimated amount of money in the United States, 1800–1860.

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output from 1834 to 1847 is estimated at less than \$11 million; the total coinage of gold during these years was over \$60 million. Though two-thirds of this was coined after 1842 it indicates that a considerable amount of gold was being attracted from foreign countries and that a broader gold basis for the circulating medium of the country was being provided. Meanwhile the coinage of silver continued at about the same rate as before 1834, the total output of the mint from that year to 1847 inclusive being \$35 million. Though the coinage of the silver dollar was resumed in 1836 less than 2,700,000 of them were minted—over half of these in the two years 1859–1860 when Western silver first appeared—and practically all of the silver coined was in the form of small change.

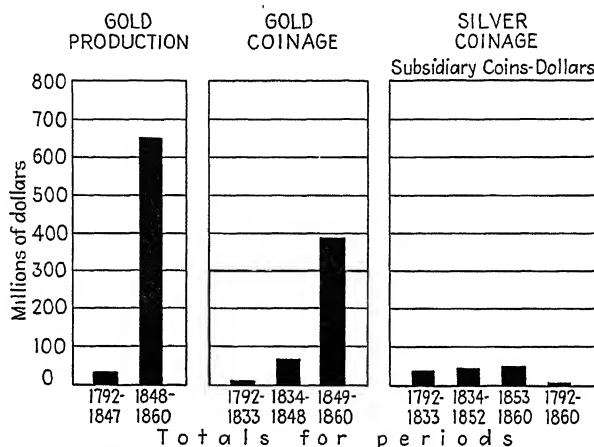


FIG. 25.—Production and coinage of the precious metals, 1792–1860.

The effects of the opening up of the rich gold mines of California and Australia was felt throughout the world and naturally with especial force in the United States. The total production of gold in the United States from 1848 to 1860 inclusive is estimated at over \$650 million, which meant an average annual output twice as great as the total output of the country for the previous half century. Much of this gold never reached the mint but about three-fifths of the total, approximately \$390 million, had been turned into coin by the close of 1860. Though at this time, as described in the preceding chapter, the country began to show net exports of the precious metals instead of imports as theretofore, and a large portion of this gold coin as well as gold bullion was being sent out of the country, the net result was an enormous addition to the country's supply of specie.

The gold discoveries also reacted upon the coinage of silver. Those discoveries resulted in a world production of gold during a single decade practically equaling the world output for the preceding 100 years. Mean-

while output of the world's silver mines showed only a slight increase; in consequence gold declined in value relative to silver. This resulted in the commercial ratio of silver to gold, which generally fluctuated between 15.7 to 1 and 15.9 to 1 during the 30 years preceding 1851, falling below 15.5 to 1 in that year. The difference between the coinage ratio of 16 to 1 and the lower market ratio represented the undervaluation of silver as coin. When this difference became appreciable, it tended to drive silver out of circulation and into the melting pot since it was worth more as bullion. As silver rose in value relative to gold, more and more of the silver coins disappeared from circulation and the coinage of silver declined. Since silver coins provided the only small change existing besides the copper coins, great inconvenience resulted. (See charts, pages 819-820.)

To relieve this difficulty Congress in 1853 passed a law reducing the amount of silver in all of the silver coins except the dollar so that the coinage ratio for the subsidiary silver was slightly less than 14 to 1. As this ratio was below the commercial ratio and so overvalued the silver in this new subsidiary coinage, there was no temptation to convert it into bullion. In fact it would have been profitable to take silver to the mint to be coined into small change; but to prevent this the law suspended the free coinage of subsidiary silver so that thereafter it was left to the government to buy such silver for making subsidiary coins as the country appeared to need. At the same time the law very properly limited the legal-tender power of these new coins to \$5. This legislation, based upon sound currency principles, had the desired result. The subsidiary silver coined by the mint was rapidly increased, amounting to some \$44 million in the years 1853-1860, and the scarcity of small change was promptly relieved. Though the Western mines first began to produce a little silver at this time, the quantity was negligible and practically all this metal that was coined came from other countries.

A summary view of the results of the coinage laws and the activity of the mint during this period can best be obtained by a study of the charts on pages 447-448. The relatively insignificant output of coins down to 1833, the marked acceleration in the rate of coinage after that date, and the enormous outpouring of the mint after the gold discoveries are vividly suggested by the chart showing the coinage. The effect of this coinage upon the amount of specie in the country is indicated by the second chart, though the figures are only estimates. Although we can here see the marked progress made by the country in securing a sounder and more adequate basis of specie in its circulating medium after 1833, it was not until after 1850 that specie could be said to be abundant and complaints as to its scarcity ceased. However, as the chart indicates, paper money in the form of bank notes made up the greater portion of the circulating medium during most of this period. Since this paper money, as

will shortly be explained, was far from satisfactory, the growing proportion of specie in the circulating medium was all the more important, not only as a medium of exchange but also as an aid in strengthening the soundness of the bank notes. The conditions affecting the character of the bank-note element in the circulating medium will be described in the account of banking developments during the period that follows.

The Functions of Banks. In order to understand the character of a banking system and judge of its soundness and efficiency, there must be a clear conception of the functions that banks perform in our economic order and of the practices and principles essential for the efficient performance of these functions. Hence a brief summary of these points will be given before we proceed to describe and criticize the banking system that developed in the United States.

The main functions of the ordinary bank are commonly stated to be three in number: (1) the function of deposit, that is, providing a place of deposit where funds not immediately needed can be kept in safety until wanted and then promptly withdrawn; (2) the function of discount or lending, that is, providing people who need lendable funds opportunity to borrow; (3) a common, though not necessary, function, that of issue, consisting in the issue of the bank's notes which become a part of the general circulating medium. On the basis of its own capital resources and the funds deposited with it, a bank creates the credit which it lends to borrowers in the form of its notes or deposit credits. The advantages of a bank to industrial society, in addition to its function as a creator of credit, are in many respects similar to those of an organized market for any commodity. The result is not only simpler and easier facilities for lending and borrowing funds but also a tendency to distribute them, and in consequence the economic resources which they can buy, among the people who can make the best economic use of them. It is thus, in short, that banks help to increase the efficiency and productive capacity of industrial society.

If these functions are to be properly performed, certain practices and principles must be carefully observed. To perform the function of deposit properly a bank not only must provide a place for safekeeping but must make sure that its own investments or loans are safe so that there will be no question of its being able to repay the depositors. Also it must be ready to repay deposits, savings or time deposits excepted, whenever they are demanded. This necessitates that it keep enough cash reserve to meet ordinary demands and enough of its other assets in such form that in case of unusual demand they can, without serious losses, be quickly converted into cash to pay off the depositors. The proper performance of the second function, making loans, is obviously closely linked up with the safeguarding of deposits. The loans and investments must be scrutinized

with care to be sure they are safe and sufficiently liquid; borrowers who can offer the proper type of security should be accommodated; yet over-expansion of the bank's credit must not be allowed. In performing this function the bank, by extending or refusing loans, helps to determine and to guide the flow of lendable funds and the use made of a portion of the country's supply of capital; if this is wisely performed, waste and inefficiency in this use can be checked and greater economic productivity will result.

The third function, note issue, is not an essential one and nowadays many banks do not issue notes. But in the earlier period of banking in this country it was an important function—generally an essential one—and a clear understanding of the reasons for this is vital in studying the banking history of this country prior to the Civil War. Banks lend their credit which is fundamentally based upon their capital and surplus and the funds deposited with them. This credit is lent in two forms: either by giving the borrower the bank's own notes or by crediting him with a deposit against which he can draw checks as he needs the funds. Today the second form is almost universally employed. Prior to 1860 the system of using checks was little developed because it necessitates easy and quick means of communication, extensive facilities for getting credit information, and a sound, widespread, and well-organized banking system. At that period the chief means that a bank had for extending its credit in making loans was to issue its notes.

In the case of banks in the interior one might say this was the only means available and most banks, had they been deprived of the right to issue notes, would have gone out of existence. Naturally a relatively large issue of bank notes resulted which became the chief circulating medium of the country. Such specie as existed outside of the small change was kept chiefly in the banks where it served as a reserve and could be obtained for making international payments or used for settling balances between banks. Since the resort to this function of issue actually resulted in their providing most of the current circulating medium of the country, it was essential that these notes conform to the principles of a sound currency; more especially, they must be safe and stable in value. The best method to ensure safety is to take measures such that the notes can always be easily and promptly redeemed in specie; this will check overissue and prevent depreciation. Still greater stability in value is ensured if the note issue is so elastic as to expand and contract with the fluctuating needs of business.

This very summary outline but suggests the outstanding functions of a bank. There are many other minor ways in which it may serve the business world such as by the collection and transfer of funds, acting as trustee, and dealing in investments. Also only a few of the principles most

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essential to the successful performance of these functions have been mentioned. Still, by keeping these few points in mind, it will be possible to obtain a much clearer understanding of the problems that arose in the field of banking during this period, to the history of which we now turn.

The Second United States Bank. The refusal to extend the charter of the United States Bank in 1811, as events turned out, proved most unfortunate. It increased the difficulties in the management of the government's finances during the war. The lack of such control as it had exercised over the state banks, combined with the general strain on credit during the war, resulted in much unsound banking practice and a serious disorganization of the currency, especially after the suspension of specie payments in 1814. Even before the war ended a strong demand for the reestablishment of the bank developed, but it was not until 1816 that Congress passed the act providing for the chartering of the Second United States Bank. By that time the worst of the strain connected with the government's fiscal problems had passed. However, the currency situation was still chaotic, and it was especially in the belief that the bank would improve banking conditions and hasten the resumption of specie payment that this measure was enacted.

The charter provisions were in most respects similar to those of the First Bank. As before, the charter ran for 20 years and the government subscribed for one-fifth of the capital, now increased to \$35,000,000. Private subscriptions to the stock were to be paid, one-quarter in specie and the rest in government bonds. Branches were to be established and the issue of notes, not under \$5 in denomination and to be redeemable in specie, was authorized. The charges of the bank on loans and discounts were not to be above 6 per cent. Government funds in all places where the bank had an office were to be deposited in the bank unless special reasons, which were to be explained to Congress, led the Secretary of the Treasury to direct otherwise. The bank paid the government a bonus of \$1,500,000 for the charter.

The Second Bank opened its doors for business in January, 1817. The principal office was in Philadelphia; within a short time eighteen branch offices were opened and later eight more, and one was abandoned. The number and location of these branches were influenced by the fiscal needs of the government, particularly in the West, where facilitating the handling of funds received from the sale of public lands was an important consideration. The bank at once found itself in a position where it was certain to arouse the opposition of the state banks. (1) It was a competitor and took away some of their business. (2) The transfer of government deposits from the state banks to the United States Bank, coming at a time when the state banks were overexpanded, was particularly

trying; many were unable to pay back the government deposits promptly and much forbearance was necessary. (3) In the effort to force resumption of specie payment, Congress had resolved that after Feb. 20, 1817, all dues to the government should be paid in specie, treasury notes, or bank notes that were redeemable in specie. The United States Bank became the instrument through which pressure was put upon the state banks to resume specie payment, thus necessitating a contraction of their note issue and loans. A spirit of hostility to the bank was thus developed which never ceased until its career was ended.

During the first years of its existence the management of the bank left much to be desired. The capital was larger than was really needed at the time and, though much of it was kept invested in government bonds, there was a temptation to make unwise loans, often for purely speculative purposes. The note issue was rapidly expanded to over \$8 million in 1818, most of it being put out in the South and West. The policy of redeeming all notes at any office soon proved impracticable and after 1818 the branch offices were required to redeem only their own note issues, except the \$5 notes, which were redeemed everywhere. The business reaction after 1818 led to the failure of the Baltimore branch, where speculative operations had been most marked, and finally to the appointment of Langdon Cheves, a sound, conservative man, as head of the bank. Under his administration, 1819-1823, loans were contracted, the note circulation cut in half, and a more effective control over the branches inaugurated. In 1823 Nicholas Biddle succeeded to the presidency of the bank and continued in that capacity during the remainder of its existence. He was progressive, energetic, and ambitious but, though the earlier portion of his administration was marked by sound banking methods, he became less cautious after about 1828 and finally, after the charter expired and the bank secured a state charter, involved it in a disastrous failure.

Biddle believed that one of the primary purposes of the bank was to help in securing a sound currency for the whole country. To accomplish this he adopted a policy (1) of increasing the amount of the bank's notes and (2) of trying to compel the state banks to redeem their notes in specie, thus checking their depreciation. This policy was carried out by the bank's paying out only its own notes, instead of the notes of state banks which it had received, and then presenting the latter to the state banks that had issued them for payment in specie. One obstacle to the increase of the bank's own notes was the requirement that they be signed by the president and cashier, which was physically impossible in the case of a large issue; yet Congress refused to modify the regulation. This was obviated after 1827 by the resort to the device of branch drafts, made to resemble the notes very closely and serving the same purpose. Though these drafts

never constituted more than about a quarter of the outstanding circulation of the bank, their use was made the basis of a charge that the bank was exceeding its powers.

Biddle's policy resulted in a fairly rapid expansion of the bank's circulation until it reached over \$21 million in 1832, nearly four times the amount outstanding in 1823. Though somewhat more liberal provisions for special redemption of the bank's notes were adopted, the notes of branches were often at a slight discount in sections remote from Philadelphia or the branch of issue. This discount was seldom as high as 1 per cent, being so slight that as between individuals the notes were commonly accepted at par. To this extent, therefore, the bank provided a circulating medium that was practically national in character and a great improvement over the note issues of most of the state banks, especially those in the South and West where much the greater portion was in use. At the same time the pressure brought to bear upon the state banks exercised a marked influence in checking excessive issues—they were never so great during the life of the bank as in 1816 in spite of the great growth of the country's trade—and thus in lessening their depreciation. Though facing constant opposition and far from meeting with complete success, the bank did procure a marked improvement in the condition of the country's circulating medium and thus performed one of the chief functions for which it had been established.

There were, however, numerous other ways in which the bank rendered useful service to the country. After 1826 Biddle began to extend its dealings in both domestic and foreign exchange, a field of activity which the bank practically dominated before long. With its widely scattered branches and large capital it was able to provide exchange on a larger scale and at lower and more stable rates than any other institution and thus furnished better facilities for the interregional or international transfer of funds. In a similar way it was of great assistance to the government in handling its receipts and expenditures and the transfers of funds incident thereto; and it proved an absolutely safe place of deposit for these funds, the government never losing a dollar thereby, in marked contrast to its experience with the state banks.

The bank also became the holder of the main specie reserve of the country, and the state banks, generally keeping a much smaller amount of specie relatively, were inclined to fall back upon it in time of need. But in meeting the situation that arose in time of general financial strain the bank was less successful, chiefly owing to the lack of centralization in the banking system as a whole, yet in part owing to its own management. In the stringency of 1825 it was in a position to afford relief by extending its loans; in 1828 and 1831–1832 it was unable to do so, being too seriously embarrassed itself by excessive loans and discounts in the South and West

that were not promptly paid. Throughout most of its history the greater volume of the bank's business had been carried on in those sections and it was there that its services proved most useful. By this time the New England states had developed a fairly sound banking system and a marked improvement was taking place in the banks of the Middle Atlantic states; in the rest of the country the condition of the state banks was far from satisfactory. In helping to provide better banking facilities and in exercising some measure of control over the local banks, the Second United States Bank proved especially valuable in the economic development of the South and West.

The bank's charter expired at the end of 1836. The question of its renewal came to the front in 1829 when President Jackson in his first message to Congress expressed doubts as to the constitutionality of the bank and its success in establishing a sound currency. The question soon became a prominent political issue resulting in what is known as the "Bank War," and as is apt to be the case with complicated economic problems, extraneous factors were brought into the discussion and exaggeration prevailed. The opposition came from various sources. Some questioned the bank's constitutionality, and states' rights people feared its powers. The Democrats asserted that it was trying to exert political influence, though the chief basis for the charge was the fact that the bank mistakenly allowed itself to be drawn into such action in meeting the attacks upon it. Then there was the long-standing opposition of the state banks, especially those of the South and West, which feared its competition and constantly fought its measures for controlling them.

Finally, there was the democratic spirit of the time opposed to monopoly, particularly anything resembling a money power, led and in a high degree exemplified by Andrew Jackson. Though Congress in 1832 passed an act to renew the charter in a slightly modified form, Jackson vetoed it. After his reelection it was realized that in the face of his vigorous opposition the struggle to have the charter renewed was vain. Government funds began to be deposited in the state banks; the bank itself proceeded to wind up its affairs and at the end of 1836 went out of existence. In some cases state banks were organized to take over the business of the branches and in Pennsylvania a charter was secured to take over that of the principal office. This state bank, continuing under Biddle's management and burdened with excessive capital, became reckless and failed disastrously in the difficulties following the panic of 1837. This ended the country's experiments with a great central bank.

The Growth of State Banks, 1816-1860. The expansion of state banks and the fluctuations in their condition during this period are indicated in the table on page 456. The figures, especially those for the years previous to 1836, are not complete.

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It will be seen from this table that the rapid expansion of banking, which had begun with the disappearance of the First United States Bank and was stimulated during the War of 1812, did not end abruptly with the close of the war. The establishment of the Second United States Bank and the efforts to force resumption of specie payments checked the movement, and the panic of 1818-1819 brought it to an end and resulted in a general contraction. The uncertain fluctuations in business conditions during the twenties, aided by more effective control exercised by the United States Bank, resulted in a very moderate rate of growth. In the thirties the great business activity and speculative boom together with the disappearance of the United States Bank brought an enormous expansion in state banking which finally culminated in the panic of 1837. The business depression that followed was so long drawn out and so severe that, in spite of the country's steady growth, the business of the state banks as late as 1850 had not returned to the level reached in 1836. There followed the unusually prosperous decade of the fifties and, although another panic resulted in 1857, the banks had more than recovered from this brief reaction by 1860, so that both the number of banks and the volume of their business were about double the figures at the beginning of the decade.

Year	Number of banks	Capital (millions)	Loans (millions)	Deposits (millions)	Circulation (millions)	Specie (millions)
1815	208	\$ 82	\$150	....	\$45-100	\$17
1820	307	102	..	\$ 31	40	16
1830	330	145	200	....	61	22
1836	713	251	457	115	140	40
1845	707	206	288	88	89	44
1850	824	217	364	109	131	45
1860	1,562	421	691	253	207	83

The organization of banks at this time was often owing not only to the desire to provide the usual facilities afforded by a commercial bank but also to the wish of the individuals organizing the banks to secure the means for financing some of their own enterprises. Thus Secretary of the Treasury Crawford, writing in 1820, said that most of the banks started after 1812 were organized

... not because there was capital seeking investment, not because the places where they were established had commerce and manufactures which required their fostering aid, but because men without active capital wanted the means of obtaining loans which their standing in the community would not command from banks or individuals having real capital and established credit.

Similar reasons led to granting banking powers to various railroad companies, chiefly in the South, it being expected that these powers would be used in raising the capital required to finance the building of the railroad. The organization of banks for such purposes led to unwise banking practices as their capital was apt to become tied up in assets that were not liquid and often unsound in character.

In the case of the banks partly or entirely owned by the states, of which many were organized chiefly in the South and West, the idea that a bank would help in the financing of state enterprises as well as in handling state funds was a motive in chartering them. The desire that the state should share in the profits of the business and the belief that the financial power wielded should rest, at least in part, in the hands of the state rather than with private individuals were also motives for their organization. At first a bank could secure a charter only by a special act of the state legislature, and this not infrequently resulted in political wirepulling and favoritism. The desire to eliminate these evils and the belief that greater freedom in the organization of the banks would be more democratic and prevent any danger of a moneyed monopoly finally led to the adoption of free-banking laws under which any group of individuals conforming to the requirements of a general law were allowed to start a bank. The first free-banking law was passed in Michigan in 1837 but soon repealed; New York followed in 1838 and the idea was soon adopted by other states, some sixteen in all by 1860.

Bank Loans and Specie Reserves. The character of the loans made by the banks naturally varied greatly in different sections of the country. Most of the banks lent money on real estate, since this was the chief tangible asset of the majority of the people. The main dangers in this were (1) the tendency to make too large a loan in proportion to the value of the property, resulting in a loss in case the property were taken over by the bank and sold; (2) the fact that such loans were frequently for long periods and often had to be renewed; if not renewed and the property had to be taken over, it was not readily salable. This tended to decrease the liquidity of the bank's assets. Because of these dangers the more conservative banks in the East tended to discourage such loans, but in the West and South they were very common. In the South, in addition to real-estate security, loans secured by slaves or by liens on the prospective crops were customary. These loans frequently ran from six to nine months. In the case of a crop failure or a serious drop in the market price of the product either a renewal of the loan or acceptance of a loss was often necessary. In the East loans on merchandise and in the South on the staple crops were common.

As the volume of stocks and bonds increased and trading on the stock exchanges rose to importance, collateral loans backed by such securities

became more frequent, especially in financial centers such as New York; there was always much popular opposition to this type of loan as tending to encourage speculation and to decrease the funds available for other purposes. The practice of making loans on the security of the bank's own stock, chiefly to accommodate the purchaser of stock who was unable to pay in full, was widely followed; but the undesirable consequences led to its prohibition by some of the states. Excessive loans to directors and other officials of the banks were of frequent occurrence, as might be expected in view of the conditions under which many of the banks were organized, and eventually most states were forced to set a definite limit to such borrowings. In addition to the general discounting of short-time notes the banks in the Northeast made longer loans to those engaged in foreign trade. The general situation is well characterized by Prof. Dewey who says,

During the earlier years of banking borrowers were apt to regard a bank as a benevolent rather than a money-making institution, and as it held special grants by legislative favor it was held bound to accommodate the public. A bank was therefore criticized when it demanded that notes be paid at maturity, and that no renewals be allowed.

Under such conditions the chief dangers arose from overextension of the bank's credit, loans made on improper or inadequate security, and the possibility that the bank's funds might become tied up in nonliquid assets.

The maintenance of an adequate specie reserve to meet the demands of depositors and noteholders is essential to sound banking, yet throughout this period there was a tendency on the part of many banks to ignore this principle. Where the state required that a certain amount of specie be on hand before a bank could begin business, the provision was frequently violated in spirit if not technically; sometimes the necessary specie was simply borrowed for the time being; even when the requirement was observed at the start, many banks, notably those in the country districts, soon allowed their specie to dwindle to a dangerously low figure. Thus at one time a New England bank with \$500,000 of its notes outstanding was found to possess \$86.48 in cash with which to pay them. There was considerable difference of opinion as to just what was the desirable proportion of specie holdings to the demand liabilities, but most were inclined to fix it at between one-fifth and one-third. In practice the ratio, even for considerable groups of banks, commonly fell below one-fifth and sometimes below one-tenth; many individual banks made a still poorer showing. In this connection it must be borne in mind that, under the undeveloped and disorganized state of the banking system and the lack of quick means for transportation and communication, a

larger reserve was necessary to secure safety than would be the case today.

The progress made in trying to eliminate this evil either through voluntary action on the part of the banks or state legislation was very slow, and the problem was widely discussed. Since, during most of this period, the outstanding notes made up the greater portion of the banks' demand liabilities, the specie reserve was looked upon as mainly to be used to ensure prompt redemption of the notes; hence many of the provisions proposed to secure the maintenance of a specie reserve fixed the required proportions in terms of the note issue. After about 1840, as deposits increased in relative importance, especially in the Northeast, it came to be seen that an adequate reserve to protect depositors was also very important and laws designed to meet this need began to be enacted. Thus when Massachusetts in 1858, after nearly 20 years of agitation, finally passed a law requiring a certain specie reserve, it provided that this reserve was to be 15 per cent of a bank's circulation and deposits, though country banks were allowed to count their noninterest-bearing deposits in Boston and New York as a part of this reserve.

In New York the Free Banking Act of 1838 required a specie reserve of $12\frac{1}{2}$ per cent of the note circulation, though this provision was repealed in 1840. After the panic of 1857 the New York City banks entered into a voluntary agreement to keep a reserve of 20 per cent of their net deposits. Pennsylvania had no specific requirement until 1860. Virginia in 1837 required a specie reserve of one-fifth of the note issue. Most of the Southern states took no action, with the notable exception of Louisiana. In that state the New Orleans banks in 1838 agreed to keep a specie reserve of one-third of their demand liabilities and in 1842 a state law established the same ratio with the added requirement that the banks must hold short-time paper equal to the remaining two-thirds. This law ensuring liquid assets as well as adequate specie was the soundest state banking act of the period, and subsequently attracted much attention especially when the New Orleans banks passed through the panic of 1857 without suspending. Ohio in 1845 required a 30 per cent specie reserve against notes as well as a safety fund; in 1852 Indiana established a $12\frac{1}{2}$ per cent reserve. Following the panic of 1857 Missouri, Iowa, and Minnesota also enacted substantial specie reserve requirements. Outside of Louisiana, Iowa, and Massachusetts the need for such reserves for protection against the rapidly growing deposit liabilities as well as the note issues was little recognized. In 1860, though the legal requirements concerning a specie reserve in most states still fell far short of what was desirable, the resulting dangers, forcibly impressed upon the country in times of a panic, were generally recognized; and in practice the well-managed banks maintained a higher standard than that established by legislation.

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The Note Issues of the State Banks. It has been pointed out that the issue of notes was an extremely important phase of a bank's activities during this period. In making loans the banks generally extended their credit by issuing notes rather than by giving deposit credits. Although the latter method began to be more frequently used after about 1840, it was not until 1855 that the total deposits in the state banks came to exceed the total of their note issues; in New York state this situation existed after 1837. Furthermore, those note issues constituted the greater portion of the money in general use, since such specie as the country possessed, outside of small change, was generally kept in the banks, at least up to about 1850. Consequently people who had but little dealings with banks were affected by the manner in which the banks performed the function of issue. Thus a clear understanding of the character of the bank-note issues is particularly important in judging the banking system of the period.

We have indicated that the most essential quality in bank notes is that their value be stable and unquestionable. Unfortunately it was in this very respect that the bank-note issues of the period were most defective. The most certain way to ensure soundness of an issue is to adopt measures such that the notes always can be easily and quickly converted into specie on demand. As long as this is possible an overissue of the notes will be prevented and their value will not fall below that of the specie in which they are redeemable. The failure to adopt measures to ensure this was responsible for the worst evil in the note issues of this period; and it was toward providing such measures that the reforms in both banking practice and state legislation were directed.

This period is frequently spoken of as that of "wild-cat banking." The name suggests a common evil; many a bank was located in the backwoods regions where wild cats abounded for the very purpose of making it difficult for anybody to bring its notes to the bank for redemption. Even when no such purpose existed the difficulties of transportation and communication were such that it was not easy to get the notes of the country banks redeemed. In consequence, when the notes of such banks once got into circulation, there was no really effective check on their overissue and they commonly depreciated in value. Frequently this depreciation varied with the distance from the place of issue. Thus in Boston, at one time during the War of 1812, the notes of New York banks were at a discount of 20 per cent, of Philadelphia banks at 24 per cent, of Baltimore banks at 30 per cent, and those of Southern banks were not accepted at all. It was a common saying in 1811 that inside of 24 hours a good horseman could outride the district bounding the circulation of the notes of most banks. In many cases the banks themselves put obstacles in the way of specie redemption.

We are told of three North Carolina banks in 1819 that made an agreement that they would not redeem their notes in specie, whereupon the notes fell to a discount of 15 per cent. At the same time in making loans they paid out their notes but required that they be repaid in specie; then with the specie thus obtained, they went out and bought up their depreciated notes, making a handsome profit on the transaction at the expense of the public. A Georgia bank is said to have required anyone presenting one of its notes for redemption to take an oath of ownership before five directors, the cashier, and a justice of the peace. It may be surmised that when cash was scarce the directors were also scarce. The attitude of the banks toward any individual who presented notes for redemption in specie was anything but favorable and a person likely to want accommodation at a bank had good reason to hesitate before thus incurring its disfavor. This contributed largely to the widespread feeling that it was undesirable to present notes for redemption—a most unfortunate notion. In addition to these definite obstacles to easy redemption the failure of many banks to maintain an adequate specie reserve—in no small measure a product of allowing their assets to become nonliquid in character—only aggravated the evil.

Measures for Safeguarding Bank-note Issues. The early bank charters seldom included any requirement for the redemption of notes. The limitations on issue, if any, were lax, and were commonly in the form of a limitation on the bank's total indebtedness to two or three times its capital. That something more was needed was forcibly impressed upon the people by the banking experiences in the period after about 1800 which culminated in the reckless banking prevalent during the War of 1812. At the start the most rapid development of banking institutions had taken place in New England, and it was there, after the evils of current banking methods had become serious, that the first important system for safeguarding note issues was introduced. This was the Suffolk Banking System, the adoption of which was due to voluntary action on the part of such banks as joined.

The initiative came from the Boston banks which found that their own notes, being easily presented for redemption and so worth par, were constantly driven out of circulation by the depreciated notes of the New England country banks through the operation of Gresham's law. The Suffolk Bank of Boston, which was founded in 1818, adopted the policy of taking the country bank notes which it received and sending them to the bank of issue for redemption; other Boston banks soon joined in the practice. In 1825 a system was developed under which the Suffolk Bank agreed to redeem the notes of such country banks as either kept a deposit with it and forwarded to it from time to time the funds necessary to cover their notes presented for redemption, or otherwise provided for

the redemption of their notes in Boston. Boston being the business center of most of New England, this provided a form of clearinghouse with easy and quick facilities for the redemption of country bank notes, and thus tended to check overissue and prevent their depreciation. As many of the New England banks entered this system the bank notes of this section soon became the soundest in the country.

The success of the Suffolk system in New England was such that in 1840 New York passed a law requiring the country banks to redeem their notes at a discount of not more than $\frac{1}{2}$ per cent at either Albany or New York; in 1851 this discount was cut in half. In 1850 Pennsylvania passed a similar law providing for redemption at Philadelphia and Pittsburgh, though this was repealed during the crisis of 1857. In Ohio a group of Cincinnati banks, starting as early as 1845, voluntarily set up a system similar to that of the Suffolk Bank. The desire of outside banks to share in the profitable business of the Suffolk Bank led them to organize the Bank of Mutual Redemption for the same purpose. It began business in 1858 and, as a majority of the New England banks joined this system, the Suffolk Bank shortly withdrew from the business. Although such provisions for redemption did not wholly eliminate bank failures and resulting losses to noteholders, they greatly lessened the likelihood of such an occurrence.

Another method for safeguarding note issues was introduced under the Safety Fund System adopted by the state of New York in 1829. Banks belonging to this system—93 in all came under it—had their note issue limited to twice their capital and were required to deposit with the state a sum equivalent to 3 per cent of their capital to make up a safety fund out of which the notes of any bank that failed were to be paid. Though designed to protect noteholders, the fund was made liable for other debts as well, and as deposits began to grow in importance—in this state their total exceeded that of the note issues after 1837—it was found, when an unusually large number of banks failed after the panic of 1837, that the fund was insufficient to meet the burden imposed. Finally, in 1845, the state came to the rescue by making a loan to the fund, although in 1842 the law had been amended so as to make the fund liable for note issues only. In the meantime, however, the notes of the failed banks were greatly depreciated and holders who disposed of them before the state advanced the money for their redemption lost heavily. In 1846 the state made the notes a prior lien on the assets of a failed bank and imposed a double liability on the stockholders beginning in 1850, though even this did not prevent some subsequent small losses to noteholders. After 1839 no more charters were granted under this system and those in existence had all expired by 1866. A somewhat similar system was adopted in Vermont in 1831. The Safety Fund System, though introducing a marked

improvement, was not a complete success; its chief defects were in matters of detail, many of which were later eliminated. The main idea was subsequently adopted in Canada where, aided by the sounder banking methods of a later period, it has proved successful.

In New York the banks organized under this system were eventually supplanted by those organized under the free-banking system adopted in 1838. The provision of this law permitting any group to organize a bank provided it conformed to the general requirements, from which the system acquired its name, has already been noted. More important were the provisions for safeguarding noteholders. A specie reserve of $12\frac{1}{2}$ per cent of the note issue was required, though this was soon repealed, and the issue of any bank was limited to between 1 and $1\frac{1}{2}$ times its capital. A bank was also required to deposit with the state certain classes of securities equal in amount to its outstanding notes, these securities to be sold and the proceeds used to redeem the notes in case the bank failed. The success of this plan in safeguarding the notes depended on the character of the securities deposited; at the beginning this proved unsatisfactory. The law provided that bonds of the United States, of the state of New York, or of any state approved by the comptroller, or up to one-half of the total approved mortgages on New York real estate, were acceptable; but when banks belonging to the system failed, as soon happened, and the securities on deposit were sold, the proceeds proved insufficient to pay off their notes. The real-estate security was unsatisfactory because a forced sale was fairly certain to result in a loss, and at this period the bonds of most states were greatly depreciated, many selling at less than two-thirds their face value.

Thereafter amendments to the law made only the bonds of the United States and the state of New York acceptable, and thus eliminated the most serious defect. The main features of the free-banking system made a wide popular appeal; by 1860 they had been adopted by sixteen states and later were embodied in the National Banking System. Unfortunately, in the rapid spread of this system that occurred during the fifties there appeared the same defect in the character of the securities that at first existed in New York. The worst results developed in the states of the Northwest where the failure of a large proportion of the free banks resulted in losses of several millions to their noteholders.

In addition to the introduction of the systems just described considerable progress was made in safeguarding note issues both through legislation and the spread of sounder banking methods. The states generally set a definite limitation on the note issue, commonly fixing it at some proportion of a bank's capital. In the North the usual proportion was between two-thirds and twice the capital; in the South three times the capital prevailed. The states also came to require specie redemption—and to im-

pose penalties for violation of this provision, though the results thus obtained were slight. It is obvious, too, that the various measures designed to better the character of the bank's assets, increase their specie reserves, and promote sounder banking in general, not to mention the voluntary adoption of better practices by the banks themselves, would afford additional safeguards to the noteholders as well as to other creditors of the banks.

The Elasticity of the Bank-note Issues. Although security is the first requisite in a note issue, it is also desirable that such issues should be so elastic that the volume outstanding will fluctuate with the volume of business, thus avoiding, on the one hand, a stringency, which checks even sound business and causes unnecessary losses, and, on the other hand, a redundancy, which provides an abnormal stimulus to business and leads to inflation and depreciation. Such elasticity of the note issues was particularly desirable in the United States at this period, chiefly because (1) there was no other element in the currency that was elastic, since specie was not so by its very nature and deposit currency had as yet scarcely developed; (2) agriculture, which is markedly seasonal in its need for currency, was so predominant an activity of the country, and (3) the custom of using money in business transactions was much more widely developed than in colonial times. Yet, great as was the need, the state bank notes were not really elastic and this lack was no small factor among the financial evils with which the country was plagued.

This lack of elasticity arose from the fact that generally it was much too easy to expand the note issues far beyond the legitimate needs of business and there was seldom sufficient pressure to secure the proper contraction. The necessity for checking an excessive expansion of credit by raising the rate of discount—always generally unpopular—was very seldom recognized. As a result, in times of prosperity the overexpansion of bank credits, chiefly in the form of note issues, helped to engender such abnormally speculative booms as culminated in the panics of 1818, 1837, and 1857. Then when the crash came and the speculative bubble burst, the credit structure collapsed and the contraction was acute. It was just at this point that the need to extend credit to really sound enterprises was most urgent if the panic was to be checked and unnecessary losses prevented. The sharp contraction of circulation at such a time was owing in part to the lack of any provision for such an emergency and in part to the decentralized character of the banking system which prevented that unity of action among the banks, essential to success, and led every bank to try and save itself regardless of others or the general interest.

It cannot be claimed that much progress was made during these years in securing greater elasticity in the bank-note issues. The most important gains came from the various measures which were designed to provide

quick and easy means for the redemption of notes and which tended to check inflation and facilitate contraction. In addition to the measures previously noted mention should be made of the Louisiana law of 1842 and the Massachusetts law of 1843 which forbade banks to pay out any notes but their own. This led them promptly to return for redemption the notes of other banks that they received. Such a provision has always proved beneficial in increasing the elasticity of bank-note issues. It was estimated that by 1857 the note issues of New England banks were redeemed at least eight times a year, doubtless making them the most elastic in the country. On the other hand it should be noted that the provisions under which the bond-secured notes of the free-banking systems were put out tended to make these issues inelastic; in time of stringency few banks were prepared to invest more money in buying the bonds that were required before they could increase their circulation. Though some progress had been made by 1860, the bank-note issues of the country as a whole were still far from elastic.

Bank-note Issues and the Circulation of Specie. The relation between the total volume of bank notes and the supply of specie in the country has been shown in the chart on page 447, and the fact noted that at least up to about 1850 relatively little of the specie was used in ordinary business transactions. The preceding description of the character of the note issues largely explains the reason for this, since it is obvious that wherever depreciated notes were in circulation they would tend to drive out specie. There were constant complaints about the scarcity of specie, just as there had been in colonial times. The main cause of this, just as in the earlier period, was the presence of depreciated paper money. This evil was somewhat accentuated by the fact that the banks were allowed to issue notes of small denominations. In 1830 there were but three states in which notes under \$5 did not circulate—in the Carolinas there were some for a few cents—and the total of such notes was estimated at \$7 million. The agitation for “hard money” led by Jackson induced a number of states to prohibit notes for less than \$5. When the panic of 1837 brought a general suspension of specie payments, most of these laws were temporarily suspended, repealed, or ignored and in 1840, outside of Pennsylvania and the Southern states, small notes were generally current. So great was the popular opposition to restrictions on such issues that little improvement occurred before 1860.

The issue of these small notes tended to decrease the quantity of specie kept in the country for use in ordinary business transactions, at least in sections where the bank notes were not seriously depreciated. This tended to aggravate the difficulties when there was an increased need for specie either for export or following a sharp contraction of the note circulation. Until the influx of gold from California in the fifties the

country's supply of specie was ordinarily so small that even a moderate foreign drain was likely to cause trouble in the money market. A larger supply of specie would have helped to secure greater stability in the money market and the circulating medium.

Other Banking Reforms. In addition to the reforms connected with improvement of the note issues and safeguarding the deposits just mentioned, a few that were of a more general character deserve notice. The chaotic condition of the note issues was improved by laws prohibiting all issues by other than incorporated banks. Such a prohibition had been generally adopted by 1830, though sometimes disregarded, especially when small change became scarce. Even then the great number of state bank issues and the marked variations in their appearance were such that counterfeits or issues of spurious banks easily found their way into circulation. As late as the fifties, bankers had to use daily announcements of counterfeit and spurious notes to safeguard themselves and the general public was practically helpless.

In some states the banks were strengthened by measures designed to provide for the accumulation of a surplus, though in early years such a policy had been frowned upon as tending to create monopolies. Imposing a double liability on the bank's stockholders became fairly common in the fifties as providing an additional safeguard for creditors of the banks, and giving the notes of failed banks a prior claim on the assets helped to protect the holders. The reaction against state-owned or -controlled banks, which developed in the forties after the banking crash and collapse of state credit following the panic of 1837, had a beneficial effect, for in many places the state-owned banks had been ruined because the state had employed them in the most reckless way to bolster up its finances and promote its various enterprises.

Some aid in the enforcement of the various banking laws was provided by a fairly general requirement that banks publish annual reports. Unfortunately, in the earlier years, such a requirement was seldom enforced. Even when reports were made, they were often so meager, vague, or infrequent as to be of little value. Far more effective results were obtained when about 1829 some states began to appoint bank commissioners with powers to require reports and make examinations for themselves; yet, even in 1860, this absolutely essential safeguard was relatively undeveloped.

Specialization in Banking Institutions. One difficulty in the banking system of this period arose from the lack of specialization in the various functions which the banks performed. The result was that the banks that were essentially commercial banks—and nearly all the banks at least pretended to this character—were often called upon to render services for which a true commercial bank is not the best adapted—services which

today are generally provided by special types of banking institutions such as savings banks, trust companies, and investment bankers. One reason for this was that which always checks specialization: the lack in most sections of a sufficiently large volume of business to make it profitable to specialize. A second reason was the undeveloped state of banking practice and a lack of understanding of the principles essential to the successful performance of the various functions that banks were being called upon to assume.

Because of this lack of specialization in these varied functions, commercial banks were called upon to make loans the proceeds of which were put into various forms of fixed capital or other relatively permanent investments that were not self-liquidating in character. The resulting danger, that too large a portion of a bank's assets might be locked up in fixed form, was increased by the relatively undeveloped state of markets in which such assets could be disposed of quickly and without too heavy a loss. Nowadays the fact that assets representing such property are often in the form of readily marketable securities makes it easier for a bank to convert them into cash; and the existence of broader and more permanent markets for things that serve as security for various types of loans lessens the difficulty in disposing of such security in case the bank is compelled to take it over, though of course these developments do not ensure against having to sell at a loss.

The development of banking institutions specializing in functions other than that of commercial banking was very slow. What is said to be the first incorporated savings bank in the world was the Provident Institution for Savings in Boston, chartered in December, 1816. The Philadelphia Savings Fund Association started business a month earlier but was not incorporated until 1819. By 1820 there were 10 savings banks in the country but, up to 1850, when the number had risen to 108, the growth was slow. The decade of the fifties brought a rapid increase; by 1860 there were nearly 300 with almost 700,000 depositors and total deposits of about \$150 million.

The trust company business was at the first very commonly combined with that of insurance and the granting of annuities. Thus the first company given authority to execute any and all trusts in its corporate capacity was the Farmer's Fire Insurance and Loan Company chartered in 1822; the first company using the word "trust" in its title was the New York Life Insurance and Trust Company, organized in 1830 with the expectation of putting its funds chiefly into real-estate mortgages. Several companies of this type were formed in the years just preceding the panic of 1837 but the movement was then halted until just before the Civil War when a few more, including the first one in the West, were organized. Barely half a dozen of the trust companies of today were in existence be-

fore 1860. After the middle thirties these companies began to withdraw from the insurance end of their business; most of those organized thereafter did not attempt to enter that field. Besides handling trusts these companies were useful in helping to meet the need for long-time loans, especially loans on real estate.

The Banking System in General. From the foregoing account it will be obvious that the banking system of the country fell far short of functioning in an efficient manner, even by 1860. In passing judgment upon the system, however, we must bear in mind the conditions of the time. After all banking was a new line of activity with rapidly expanding functions; the principles of sound banking were none too well understood even in Europe, and it took time and experience to train a group of men really capable of carrying on the business successfully. It required much more time to educate the people to a point where they realized the limits to what banks could accomplish or were prepared to support and demand sound banking methods. Too frequently a bank was looked upon as a form of Aladdin's lamp only needing a little rubbing to evoke the jinn in the form of bank notes, and make everybody prosperous and happy. "To make a bank," said Niles, "is a great panacea for every ill that can befall the people of the United States. . . ." Furthermore the development of the country was proceeding at a very rapid pace, creating a great demand for lendable funds to be used in every way; the banks were expected to meet this need. Thus banking methods were in part a product of frontier conditions where capital was scarce, credit institutions undeveloped, and the debtor class large.

The resulting evils have been depicted. The most serious were the tendencies to overexpand loans, to allow bank assets to become tied up in nonliquid forms, to maintain too small a specie reserve, and to issue notes that undermined the soundness of the country's circulating medium and greatly accentuated the fluctuations in the business cycle. The highly decentralized character of the whole banking system created further difficulties. The large number of states chartering banks caused confusion and the lack of uniformity in banking regulations not infrequently intensified competition between banks in such a way as to lower the standards of banking practice. Also, in times of financial stress when united action to cope effectively with the situation was essential, this could not be obtained.

In counteracting the effects of this decentralization the two United States banks during their existence were of some assistance and, within a smaller area, the better managed large state banks. Some of these state banks, in marked contrast to the general record, proved eminently successful and useful: notably those in Ohio, Indiana, and Missouri in the West and those in Virginia and the Carolinas in the South. Their history

bears eloquent testimony as to the absolute necessity of sound management for success in banking. A greater development of branch banking might also have helped to counteract this decentralization as well as to provide stronger banks in small places, but local jealousies and the general fear of banking monopolies commonly opposed such a system. Though a number of banks were authorized to establish branches in the earlier period, the Northeastern states generally came to prohibit them. Except in a few states such as North Carolina and Virginia or the case of the hybrid systems of Ohio and Indiana, branch banking failed to develop.

In spite of these serious defects the period as a whole witnessed a marked improvement in banking methods. Apparently each section of the country had to learn from sad experience just how much banks could accomplish and what sound banking involved. Up to the War of 1812 the New England states were passing through this period of wild banking; then reforms began to be introduced. The turn of the middle states came next, followed by that of the South. The states of the Northwest were passing through the same experiences in the two decades preceding 1860, though some of the large state banks in this section, such as those in Ohio, Indiana, and Missouri, were admirably managed. Every disastrous panic brought a wave of reform and better banking laws. The slow process of training a group of experienced bankers and securing needed control through state legislation had accomplished much in lessening some of the worst evils, as far as individual banking practice was concerned, by the end of the period.

CHAPTER XXV

FINANCIAL INSTITUTIONS— OTHER DEVELOPMENTS

Panics and the Business Cycle. In the account of the economic development during this period there has been frequent mention of the recurrent periods of boom, panic, and depression which swept over the business life of the country. This phenomenon in the widening scope and growing intensity of its reactions was comparatively new. In colonial times there were occasions when certain sections suffered from a depression, generally owing to the fact that some important staple of the region was very low in price, as in the case of the tobacco-growing region. In other instances the outbreak of war, by interfering with some general pursuit and deranging the usual economic life, brought a similar reaction, often more widespread in effect, as seen in the depression following the Seven Years' War. Although similar causes were operative in the nineteenth century, it is clear that other factors must have entered in to bring about the marked development of this phenomenon that characterized that century of our history. Some explanation of these factors is therefore necessary.

At the start it must be stated that the phenomenon of the business cycle is none too well understood even today and there are widely conflicting theories as to its chief causes. Still it is possible to point out certain developments in the organization of industrial society and certain characteristics of our economic life which help to explain the rise of this disturbing phenomenon. Among the developments in the organization of industrial society that played a part in this result possibly first place may be given to those in the field of monetary and banking institutions which have been described in the preceding chapter. The use of money and credit in the business life of the country was rapidly increasing in importance; hence anything that seriously affected the soundness and stability of these instruments wrought all the greater disturbance. Proper control of them—an extremely delicate and difficult problem—has not even yet been attained, and the abuses that resulted greatly accentuated the troubles that created the business cycle.

Another important cause was found in those changes in the organization of industry that made it more difficult to adjust supply and demand at a profitable price level. In a frontier household economy no such prob-

lem exists; they produce only what they want. In a local economy the problem is relatively simple; needs are fairly easily determined and many commodities are only made to order. But when markets widen and become national or international in extent, and the number of those producing for the market is much larger, this problem of adjustment is vastly more difficult. At the same time this widening of the market results in greater specialization and division of labor, which involve greater interdependence between various lines of business. Thus the problems of conducting a business become more complicated and control more complex, and difficulties that beset one line of business spread out and react upon a growing circle of other lines of business until the whole country and even foreign countries become involved.

Still another development increasing the difficulties in adjustment of supply and demand arose from the changes in technological methods of production, the introduction of the factory system, and the spread of modern capitalistic industry. One result was to lengthen the period required in the process of production. When we make machines to make machines to make still other machines and so on in order to get ready to produce a given commodity, it is necessary to plan for a much longer period ahead than when only simple tools and a small shop are used; meanwhile great changes in market conditions may occur. A second result follows from the increased use of fixed and highly specialized capital. Once capital is put into this form of capital goods it cannot be easily diverted to other uses to meet variations in the demand. Also, the overhead cost representing interest on the capital so invested becomes a large item and the effort to reduce this cost per unit of product by increasing the volume of output often leads to overproduction and cutthroat competition involving heavy losses.

There were also certain characteristics in the economic life of the country that tended to accentuate the cyclical swings of business. Most important in its influence was the unprecedentedly rapid pace at which the country was developing. This tended to create a spirit of unlimited optimism and speculation, and the demand for lendable funds thus arising led to the serious abuses in banking methods already described. Another characteristic was the relatively important position in annual output occupied by a few great agricultural staples—those increasingly grown for sale and under a one-crop system. The marked fluctuations in the size as well as in the market price of these crops was a seriously disturbing factor in general business conditions. Finally, may be mentioned the undeveloped state of the knowledge of economics and of business methods. Adequate statistical data as to business conditions was almost totally lacking; cost accounting did not exist and often even the simplest accounting was ignored. Fallacious economic notions were widely held.

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Though this account of factors affecting the business cycle could easily be extended, it will at least suggest some of the more important causes underlying the series of panics that will now be briefly described.

The Panic of 1819. The panic of 1819 was in part a product of the readjustments in business following the close of the War of 1812 during which inflation had carried prices—already raised to a high level by the Napoleonic wars—to an abnormally high point; in part it was owing to a continued expansion of banking and great speculative activity in the years immediately following the return of peace. The prices of imported goods, which had experienced much the most rapid rise up to 1815 (see chart on page 271), dropped very rapidly following the enormous influx of foreign goods on the return of peace and of course forced a decline in the price of domestic manufactures that had developed during the period of restricted imports. On the other hand, the prices of the great domestic staples continued at a level almost as high as that reached in 1814 until 1817 and then, when the European demand was sharply reduced, dropped precipitately. The maintenance of this high-price level for domestic staples for nearly four years after the return of peace was an important factor in sustaining the speculation in land that developed during these years, especially in the West, where, as a result of the tremendous influx of new settlers, the sale of public lands rose to nearly 3,500,000 acres in 1818, far exceeding any previous figure.

Though the effort to bring about a resumption of specie payments in 1817 forced some contraction among the banks, chiefly in the East, the first serious trouble appeared in the middle of 1818 when the United States Bank found itself in difficulties. At the close of the year the falling off in the European demand for foodstuffs and cotton gave the final impetus to the ensuing precipitate drop in the price level of domestic commodities. The gathering storm broke in 1819. Within a few months the price of cotton fell from 32 to 15 cents a pound; wheat fell from around \$2 a bushel to \$1.05; corn from 90 cents a bushel to 51 cents. 1820 brought a further drop in general prices till they reached the level prevailing just before the outbreak of the European wars in 1793. Thus the abnormally high level of prices, engendered by war and maintained for a period the length of which is unequaled in the nation's history, finally came to an end. (See the frontispiece chart.)

The most acute distress was felt in the Middle Atlantic states and in the Ohio Valley, though the cotton belt was also hard hit. New England, at least the agricultural section, fared somewhat better. Banks suspended, commercial paper paid 3 per cent a month, in some urban centers rents were almost cut in half, and in many sections farm lands suffered a still more drastic decline in value. Never before had there been such widespread unemployment, one observer estimating the total at 500,000. In

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New York City in 1820 a tenth of the population was said to be receiving poor relief and for the first time the country was forced to consider the serious problem of urban pauperism. Attempts to carry out the severe laws as to debtors filled the prisons to overflowing.

As is always the case at such times, a widespread demand for relief arose and innumerable measures to provide this were advocated. The most extreme appeared in the West where the collapse of the land boom and the drop in prices left the large debtor class facing ruin. To protect the debtors, stay and replevin laws were passed and the statutes governing imprisonment for debt modified. When a Kentucky court declared one of these laws unconstitutional, the legislature abolished the court and created a new one. Another device was to create new banks to issue notes to

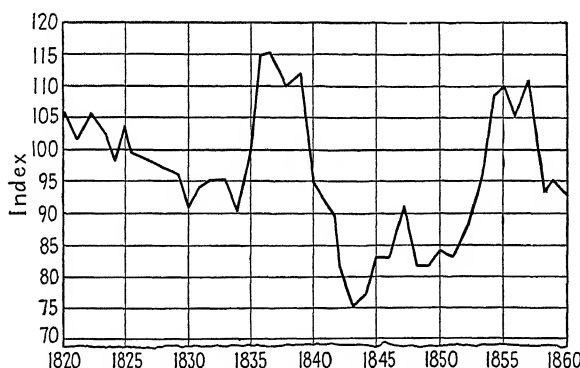


FIG. 26.—Index numbers of wholesale prices, 1820–1860. (Based on the Warren and Pearson index. 1910–1914 = 100.)

make loans to these debtors. Kentucky, Illinois, and Tennessee adopted this device and Missouri created a loan office for the same purpose. The debtors thus secured some relief but these notes soon depreciated, in Illinois to a quarter of their face value, so creditors and the public suffered. At such a time in the debt-ridden frontier community the legal rights of creditors received scant consideration.

In the West the depression lasted longer than elsewhere. By 1823 conditions were again about normal and there followed a decade marked by only moderate fluctuations in business. There was some financial pressure in 1825, chiefly a reaction from the English crisis of that year, and again in 1828 and 1831, but the boom in business and speculative activity that culminated in the next great panic began about 1833.

In the years immediately following, a wild speculation in Western lands was the outstanding feature and was carried to a point unequalled in the country's history. The rapid rise in the price of cotton increased the price of slaves and the cotton lands of the Southwest, and the advance

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in the prices of grain and livestock had a similar effect in the Northwest. Urban sites shared in the general advance, notably in the newer places such as Chicago. This activity culminated in 1836 when the sale of public land rose to a figure double that for any other year on record. Various factors furthered this speculative land boom. One was the extensive system of internal improvements, chiefly canals and railroads, then under construction, which it was obvious would greatly enhance land values. Another factor was the enormous expansion in the number of banks and the bank-note circulation in the years following 1832, providing easy facilities for buying land and accentuating the general rise in prices. The transfer of government deposits from the United States Bank to the state banks, which resulted in a shifting of considerable sums to the West, furthered the expansion of bank credit in that section, and the prospective end of the United States Bank hastened the organization of new banks. Still another factor was the inflow of foreign capital which was so great that, in spite of the much larger unfavorable balance of trade resulting from the increase in imports typical of a period of boom, specie came into the country in larger amounts than ever. Some of this capital was directly invested in various enterprises but much of it went into the bonds of the various states which were being issued in abnormally large amounts, chiefly to raise money for constructing internal improvements or establishing banks. All this simply added means to feed the speculative mania that seemed to dominate the country. When the bubble finally burst in 1837 and the inevitable day of reckoning came, it produced one of the four most severe and prolonged crises in the country's history, the others occurring in 1873, 1893, and 1929.

The Panic of 1837. Among the immediate factors that pricked the speculative bubble and precipitated the final crash, the most important was Jackson's Specie Circular of July, 1836, which, with minor exceptions, forbade the acceptance thereafter of anything but specie in payment for public lands and so checked the land speculation carried on by aid of inflated bank-note issues. Another setback came in the fall of that year when trouble developed in England partly owing to the previous drain of specie to the United States; three concerns which had been extensively engaged in extending credits to the United States became financially involved and had to contract. The price of cotton then began to fall in the English market and this soon caused trouble among the cotton brokers and planters in the United States who were unable to meet payments coming due. Domestic difficulties were further increased by crop failures in 1835 and again in 1837 and 1838, which tended to decrease the farmers' purchasing power, to delay payment of their debts, and to necessitate the importation of wheat. Another disturbing factor was the law providing for the distribution of the surplus funds of the government to the

states in quarterly installments during 1837. This necessitated the transfer of considerable sums from the government deposits in the Western banks to the East and forced the former to contract their loans.

The difficulties came to a head in May, 1837, when the banks in New York were forced to suspend; their example was at once followed by most of the banks in the rest of the country. In the ensuing reaction the New England states suffered the least; the worst effects were felt in Pennsylvania and the Southern and Western states. In New York and most of New England the banks adopted a policy of severe contraction and favored the early resumption of specie payment, but elsewhere a policy of delay, extension of credits, and relief measures was favored. By the early part of 1839 specie payments had been generally resumed by the banks; but another reaction soon set in.

Since the middle of 1837 the United States Bank of Pennsylvania had extensively engaged in operations to keep up the price of cotton and in 1839 the situation again became acute. In October the bank failed and Philadelphia banks again suspended, followed by most of those in the South and West that had previously been able to resume. The difficulties of the cotton belt became even worse than in 1837. From this time on it was simply a question of giving the process of liquidation full time to run its course. Banks failed by the hundreds, unemployment spread through the industrial centers, and commodities rapidly fell in value till the price level reached one of the lowest points in the century. In New York City rents had fallen between 30 and 50 per cent by 1840. At the same time it was stated that in Mississippi land and slaves had lost half of their value. The usual crop of relief laws followed, chiefly in the states from Pennsylvania to the south and west. Many states were unable to meet the payments due on their excessive bond issues and some fell back on repudiation. Early in 1841, just after the Philadelphia banks had once more resumed specie payment, the United States Bank was again forced to suspend and its condition proved to be so hopeless that steps were taken to wind it up, the result being a total loss for its stockholders.

By 1842 the process of liquidation had fairly run its course and the country was in the midst of the dull period of depression that follows such a reaction. People were much the sadder and somewhat the wiser for their disastrous experiments with reckless banking speculation and hastily undertaken internal improvements. The reaction led many states to adopt constitutional prohibitions against the use of state credit for internal improvements or banks and to make numerous reforms in their banking laws. The fate of the United States Bank under its Pennsylvania charter practically put an end to the agitation for another such bank, and the disastrous experience of the government in the use of the state banks as

depositories for its funds led to the establishment of the Independent Treasury by an Act of Congress in 1840. A year later, when the Whigs came into power, this law was repealed, but in 1846 when the Democrats regained control, a very similar law was enacted. In the Independent Treasury the government funds were at least safe and subject to more certain control than when kept in the state banks though, as will later appear, the resulting withdrawal of these funds from general use sometimes produced undesirable disturbances in the money market. Still, the establishment of this institution may be considered one of the gains resulting from the sad experiences of the panic.

After about 1845 business conditions began to improve more rapidly. The Irish famine followed by the repeal of the English corn laws hastened the recovery in the price of foodstuffs. Cotton also began to rise. A panic in England combined with disturbed conditions on the Continent produced a brief setback in 1847-1848, but the effects were slight and soon passed. There followed nearly a decade of great prosperity, one of the most prosperous in the country's history and sometimes referred to as the "Golden Age." The enormous output of gold from California added its stimulating influence to revive business activity, and this was supplemented by another period of rapid expansion in banking and bank credit. As prices steadily advanced, especially after 1852, agriculture, manufacturing, and trade expanded. A new speculative boom in land developed in the West and the Southwest, though less extreme than in the thirties. As cotton rose the price of slaves advanced to the highest point in our history, and a European crop failure in 1853 and the Crimean War, 1854-1856, increased the demand for foodstuffs. Railroad construction was undertaken on an unprecedented scale, particularly in the North Central states where it hastened the advance in land values. Over \$800 million was invested in this construction, a considerable portion coming from abroad as foreign capital, with renewed faith, again flowed into the country in large amounts.

The Panic of 1857. Signs of coming trouble first appeared in 1854 when there was a brief panic on the New York Stock Exchange, a tight money market, and numerous failures especially in the Ohio Valley region. This reaction checked the business expansion only temporarily and the speculative boom continued until the summer of 1857. The panic that then occurred was very acute while it lasted, but its effects were felt most in financial circles rather than in the general economic activities of the country. Financial difficulties in Europe appeared at the same time, but in this country the banks had so extended their credit that few were in a position to meet any considerable demand for specie. The failure of the Louisiana sugar crop and the greater imports resulting increased the outflow of specie at a time when country banks were withdrawing deposits

from New York. Efforts to get the banks in New York to cooperate and extend their loans failed and in the struggle of each bank to save itself a sharp contraction resulted.

One of the chief causes of the trouble was the great amount of capital that had been put into railroads in regions where it would take time to develop a sufficient volume of traffic to yield an adequate return on the investment. The practice of raising a large proportion of the capital required by the sale of bonds rather than stocks, which became common at this period, resulted in creating a fixed charge in the form of interest on the bonds; when the railroad's earnings proved insufficient to meet this charge, the road faced bankruptcy and its securities suddenly dropped in value. Many banks had become extensively involved in making advances to the railroads and soon found their assets tied up in nonliquid form, thus adding to the necessity for contraction.

The failure in August of the Ohio Life Insurance and Trust Company, which was really engaged in banking, was chiefly owing to this cause and started the trouble. Failures rapidly multiplied; money was scarcely to be had upon any terms; in October all the New York banks but one agreed to suspend specie payment, their action being at once followed by most of the banks in the rest of the country. This action made a more orderly liquidation possible. Within a month some fourteen railroads proved unable to meet their obligations, including such important lines as the Erie, the Reading, the Illinois Central, the Lackawanna, the Michigan Central, and the Michigan Southern. The Western land speculation collapsed, railroad construction halted, imports declined, unemployment became widespread, and large mass meetings of the workers became common. The cotton belt suffered less than any other section in this panic as the price of cotton, owing to the short crops, remained fairly high; and in the Ohio Valley the difficulties were probably no worse than during the reaction of 1854. Being primarily a financial panic it was the financial centers that experienced the most acute trouble; but, once the panicky stage had been passed the skies cleared and the recovery was rapid. Between November and February, 1857-1858, most of the banks in the Northeast resumed specie payments and within a few months resumption was general. Business quickly picked up and, from then until war seemed imminent, remained fairly prosperous.

The Rise of the Stock Exchange. Among the financial institutions that first became important during this period was the stock exchange. The need for this was due to the rapidly growing volume of securities and the advantages to be derived from a highly organized market where they could be most easily and efficiently bought and sold. These securities came from two sources: (1) the bonds (at that time often called stocks) issued by the national, state, and local governments and (2) the bonds

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and stocks put out by the rapidly increasing number of business enterprises that took the corporate form of organization.

Apparently the first attempt at any organization among the individuals dealing in securities occurred in New York in 1792 when a group of those who had been accustomed to gather about a buttonwood tree in Wall Street agreed upon a fixed commission charge. Early in the next century the American Stock Exchange was organized in Philadelphia, then the financial center of the country; in 1817 the New York Stock and Exchange Board was formed. At the start the securities dealt in consisted of government bonds and the stocks of banks and insurance companies, the first railroad stock being listed in 1830. By this time New York was rapidly forging ahead of Philadelphia as the financial center of the country and its stock exchange quickly assumed the preeminent position that it has held ever since. Boston was the only other city where there was a considerable market for securities during this period. During the thirties the increase in railroad securities and the speculative boom greatly augmented the volume of trading on the stock market and the newspapers began to give much more attention to the subject than formerly. From then on, railroad securities became more important and dominated those traded in on the exchange in the decade preceding the Civil War. National, state, and local bonds were next in importance and there was a growing volume of trading in the stocks of banks, insurance companies, gas and coal companies. There was also considerable trading in Boston in the stocks of the New England textile manufacturing corporations and later, during the fifties, in those of copper-mining companies. The development of the stock exchanges by providing a highly organized market for these securities, even though attended by the evils of manipulation and gambling, was of advantage in the ways in which any market is useful, particularly in increasing the mobility of private capital.

The Development of Insurance. Another important development among economic institutions during this period was in the field of insurance. In the colonial period marine insurance was the only form of insurance generally available and it was not until the nineteenth century that fire and life insurance were really introduced. Of these two forms fire insurance was the one that was then recognized as more important and grew most rapidly. In the early years many marine-insurance companies—for by this time companies rather than groups of individual underwriters were dominant—began to provide insurance against fire. Up to the time of the great New York fire in 1835 most of the companies organized to insure against fire were local in character. Since the danger of so concentrating their risks was shown by the failure of most of the New York companies at that time, the period that followed brought many reforms. The expansion of the territory covered, furthered by the general

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adoption of the agency system, scattered the risks and at the same time, through increasing the volume of insurance carried, lessened the likelihood of overwhelming losses in any year by giving a broader basis for the play of the law of averages. The unsound financial management of many companies led to a demand for state supervision and control and resulted in state legislation governing such matters and the creation of state insurance commissioners or departments. Another gain came through the adoption of methods designed to lessen fire risks and losses. In the largest cities, paid fire departments began to be maintained in place of the voluntary service theretofore used, and the fire-insurance companies adopted measures to lessen the fire risks of the property insured.

From the beginning the insurance companies were generally organized either as stock companies where the profits went to the small group of stockholders or as mutual companies where the profits in one form or another were returned to the policyholders and thus reduced the cost of their insurance. During this period there was a marked growth in popular favor of the mutual plan. There also appeared at this time a group of mutual companies that confined their business to one class of risks. Farmers' mutuals began about 1820; by 1850 there were over 100 in existence, mostly in the Northeastern states and doing a small local business. The first factory mutual was organized in 1835; half a dozen more had been formed by 1860. Their risks were confined chiefly to textile mills and by careful attention to precautions against fire they were able considerably to reduce the cost of their insurance. The absolute necessity of property insurance to provide security and stability for business and financial transactions, as well as to protect individuals against loss of home and personal property, is so generally accepted today that one wonders how people could have got along before such facilities were provided; yet it took time to convince people of this need. Such rapid progress in this respect was made during this period that by 1860 it was estimated that about \$3 billion of fire and marine insurance was in force in the country.

The general recognition of the desirability of life insurance developed much more slowly. The security of business transactions commonly was much less dependent upon the life of individuals so there was little pressure from business to secure such protection; since the immediate advantages inured chiefly to the family, the provision of this safeguard was left to the decision of each individual. At the opening of the nineteenth century there was practically no regular life insurance in the country. A few people held annuities; sometimes those going to sea insured their lives for the trip; one company, the only business corporation to do so before 1800, may have written half a dozen life-insurance policies. A slightly greater interest in life insurance developed during the first three decades

of the nineteenth century, though short-term insurance or annuities were most in favor. Private underwriting by individuals was abandoned during this time, but most of the companies that issued life insurance or annuities were engaged chiefly in some other form of insurance or in the trust company business.

The first commercial company to engage exclusively in life insurance and annuities was organized in Pennsylvania in 1809. During the thirties many such companies were organized and considerably more interest in life insurance developed, but the real growth of the business can scarcely be said to have started until the following decade. From then on until 1860 important developments took place and some of the largest companies of today date back to these years. Life-insurance companies were divorced from other forms of insurance or the trust company business; companies organized on the mutual or participating basis soon surpassed the stock companies in importance; insurance for life instead of for a short term or an annuity rapidly grew in favor, soon constituting by far the greater portion of the business; and considerable progress in actuarial science made it possible to place the business on a sounder financial basis. The Census of 1860 estimated that there were then 47 life-insurance companies with policies on 60,000 lives for a total of \$180 million. Though this is probably an underestimate it is clear that even then life insurance was just beginning to win popular support; its advantages in promoting saving and in distributing more evenly the burdens resulting from death so that they fell with less severity upon a family were still but slightly appreciated.

Capital and Its Accumulation. With the growth of roads, canals, and railroads, the increased use of machine methods of production, the rise of factories, and the expansion of trade, capital was steadily becoming a more important and essential factor of production. A rapid increase in the available supply was therefore necessary, not only to further the economic development of the country but also to enable the people to supply their wants more economically. Such an increase was the more desirable since capital was scarce in the United States as compared with the countries of western Europe. Consequently an understanding of the factors that affected the accumulation of capital during this period is important.

The accumulation of capital within a country, as previously pointed out, depends (1) upon the amount of the annual output of wealth that can be saved and (2) upon the proportion of this fund that is actually saved—this depending upon the effective desire of accumulation. That there was an enormous increase in the annual output of wealth in the country during this period the preceding account of our economic development makes plain; although a much greater population had to be supported by this output, there can be no question but what the output increased more

rapidly than the population. This result was owing to all the developments in science and the organization of industrial society that tended to increase the efficiency in the production of economic goods or services. Thus the savable fund grew. Yet not all of the amount that could be saved over and above what was necessary to maintain existence was saved; there was an increased per capita outlay for consumers' goods; the actual standard of living of most people rose. In spite of the resulting greater deduction from the savable fund, a larger amount was actually saved. This was due to a desire to save more as well as to the larger savable fund.

This increased desire to save was a product of many factors only a few of which can be mentioned. The spread of education increased people's foresight and their desire to safeguard their future by provision against a rainy day. At the same time it served to increase their wants, and led to saving in order that in the future they or their children might enjoy a higher standard of living. The maintenance of peace and order and the greater safeguarding of property rights, by increasing the assurance that those who saved would enjoy the fruit of their abstinence, stimulated thrift. The absence of any serious and prolonged war added to the sense of security at the same time that it minimized the waste of wealth that war involves. In time of peace the country was content with an outlay for purposes of defense that might well arouse the envy of the people of Europe with their burden of armament and military service. Finally, the development of financial institutions such as savings banks, trust companies, and insurance gave an impetus to saving, not only by providing places of safekeeping, but by paying interest on the funds saved and helping to direct investments into lines where they would be more secure and profitable.

In addition to the capital accumulated from our own output of wealth the available supply was also increased by the funds brought by immigrants and by the inflow of foreign capital seeking to obtain in a country where capital was relatively scarce a higher rate of return than was generally available in Europe. As the credit of the nation and of the states improved and the great future development of the country became assured, more and more such capital flowed into the country for permanent investment, to say nothing of the short-time mercantile credits or loans extended to American importers. In the earlier years much of this capital was invested in land, government bonds, or stock of the two United States Banks; some went into canals and manufacturing establishments. In the twenties foreign banking houses began to establish branches in this country. In the early thirties a large amount of foreign capital was invested in the state bonds then being issued so freely, but the financial collapse of many of the states that soon followed ended this for the time being. American railroad securities began to be dealt in on the London

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Exchange about 1838, and in the heavy inflow of foreign capital in the fifties a large amount was invested in the railroads. Much the greater portion of this capital came from Great Britain but France and thrifty Holland contributed some. How large a sum these more permanent investments amounted to cannot be determined with any accuracy but it is estimated at nearly \$200 million by 1850 and about twice that in 1860.

In these ways, as time went on, the supply of capital in the country was steadily increased. As the net savings of each generation were added to the amount inherited from the preceding one, every succeeding generation had a larger supply of capital to aid it in producing economic goods to supply its wants. It has been estimated that in the decade of the fifties the average annual addition to the national wealth was about \$33 per capita or \$180 for the typical family. Some of this was used to add to the supply of consumers' goods; a portion was simply a product of the increased value of land, only a part of which was due to capital spent in improving the land itself. A considerable portion of this annual increase went to augment the nation's supply of capital goods. The total national wealth of the country in 1790 has been roughly estimated at \$552 million or \$171 per capita for the free population. Of this total almost two-thirds represented buildings and real estate and the remainder was about equally divided between slaves and other personal property. By 1860 the estimated national wealth subject to taxation had risen to over \$16 billion or \$590 per capita for the free population. This increase in the per capita wealth, even after allowing for the higher price level of 1860, meant an enormous increase in the economic resources of the nation and a marked advance in the material well-being of the people.

The Mobility and Distribution of Capital. In addition to the gain represented by the increased supply of capital there was also a gain from the developments that tended to promote greater efficiency in the use of the supply of available capital. Although all the advances in technological and business methods furthered this result, particular mention should here be made of the ways in which the development of financial institutions was of aid. The greater the mobility of an agent of production—that is, the ease, economy, and freedom with which it can be moved from one place or use to another place or use—the greater the likelihood that it will be employed in the most productive manner. Of the four agents of production lendable capital is most easily moved from place to place, business management comes next, and labor third; land is practically immobile. Even free capital seeking investment does not move with perfect freedom; people may hesitate to invest in enterprises at a great distance or may be unwilling to enter lines of business with which they are not familiar. In this country the supply of capital was more abundant in the populous and wealthy states of the Northeast than in the South or

West; in England, France, or Holland it was more abundant than in this country. Thus anything that tended to make lendable capital more mobile, so that it flowed into this country from abroad or within this country moved readily to the sections where it was scarce, tended to increase its productivity and thus to increase the nation's income.

This result was furthered by the development of many of the financial institutions already described. The rise of the banking system, in spite of its many defects, gave greater freedom and economy in the movement of lendable funds and helped to direct their investment towards sounder and more profitable enterprises. The same was true of the funds gathered by insurance companies. The development of the corporation as a form of business organization and the rise of stock exchanges providing a ready market for securities gave greater latitude and freedom to investors. The maintenance of social order and provisions for the protection of property rights increased people's willingness to invest at a distance, and the improved facilities for communication, especially those for securing credit information, had the same effect.

Usury laws fixing the maximum legal rate of interest existed in most states, but they had little effect. Though justifiable if intelligently drawn up to protect the ignorant and poor who borrow chiefly for consumption purposes, such attempts to fix the price of capital borrowed for investment are certain to fail; for if the market rate of interest is above the legal limit either the law will be evaded or, if actually enforced, capital is so mobile it will go elsewhere and thus increase its scarcity. The failure of these laws made capital more mobile, though the devices sometimes used for evasion were responsible for certain banking evils.

Along with the increase in wealth and capital the individual accumulations of private capital grew in size. In colonial times land and trade had been the chief sources from which large fortunes arose. During this period the growth of urban real-estate values became a more important factor in such accumulations. On the other hand the field of foreign trade somewhat declined in importance, partly because it became a less important factor among economic pursuits and partly because the decrease in various risks previously attending it brought greater stability and less chance of large, though occasional, profits. New sources of large fortunes appeared with the growth of manufacturing, mining, railroads, banking, and speculation. Such fortunes further increased the disparity between the very rich and the poor. At the same time the growth of private wealth tended to give its possessors a relatively greater influence in the political and social as well as in the economic life of the time.

CHAPTER XXVI

THE STATE AND THE ECONOMIC ORDER

Introduction. In the interaction between the economic life and the political institutions of the country during this period two factors played a predominant part. One was the steadily growing demand for a more truly democratic and representative government. The ideals underlying the revolutionary movement had by no means been carried out to their logical conclusions in the political institutions that were afterwards set up, for the new Constitution reflected a fear of the masses; the same was true of the state governments. Yet those ideals were inherent in human nature; the whole trend of history reflects the never ceasing struggle toward their attainment, a struggle which only becomes the more determined as the economic advance of the people makes possible a higher civilization and, at the same time that it broadens and raises their ideal aspirations, gives them greater power to enforce their demands. These were ideals which, as has been previously pointed out, the whole social environment in the United States tended to accentuate. Just as in colonial times, so during this period, that influence was a potent factor in accentuating the demand for more democratic political institutions. The results are reflected in the marked broadening of the franchise and in the various changes designed to give the people more immediate and direct control in the affairs of the state.

The second factor was the rapid economic development of the country and the marked changes in the organization of industrial society. The state performs so numerous and such important functions in the economic life of a people that the interaction between political and economic institutions is very close and changes in either group of institutions generally necessitate changes in the other group so as to secure the proper coordination between the two. During most periods in the history of the United States the changes in the economic life of the people and in the organization of industrial society have been taking place more rapidly than changes in the political institutions and legislation; the former have commonly set the pace and the latter have tended to lag behind. In the period under review such changes as followed the opening up of the West, the introduction of railways, the rise of the factory system, the spread of banking, the increase of the laboring classes, the growth of cities, and the development of a national economy, created new problems

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and necessitated much legislation and alteration of our political institutions so as to enable the state to function more successfully in promoting the economic development and well-being of the nation.

The Broadening of Suffrage Rights. The most important result of the growing demand of the people for more complete control in government was the rapid broadening of the suffrage rights, chiefly through the practical elimination of all qualifications based upon wealth either in the form of ownership of property or in the payment of taxes. Such qualifications had existed in all the colonies but began to be modified after the outbreak of the Revolution. As practically all the remaining religious qualifications were swept away at that time, or soon after, the property and tax-payment qualifications remained the only important limitations on white male suffrage. The struggle to abolish these was chiefly confined to the original thirteen states, for the democratizing influence of the West and the spirit of the times were such that only four of the states later admitted to the Union came in with such limitations in their constitutions. Mississippi, admitted in 1817, was the last of these; Tennessee was the only one of the four to establish a property rather than a tax-paying qualification.

In the older states the more conservative, propertied classes, naturally loath to surrender to the masses the power they possessed, were unable to withstand the rising tide of democratic sentiment and were forced to concede one modification after another. Typically the first step was to accept the ownership of personal property as an alternative for the requirement of ownership of real property. This was simply a recognition of the growth of the personal-property-owning group in the larger towns and cities; the modification had begun before the Revolution. Next came a reduction in the amount of the property requirement or the acceptance of the payment of taxes, either as an alternative to property ownership or as the only requirement. Finally the requirement was abolished altogether. After 1821 property ownership remained as a requirement in but five states; it entirely disappeared when abandoned by North Carolina in 1856. Dorr's Rebellion in Rhode Island in 1842 marked the climax of this struggle. After 1851 the tax-paying requirement remained in only five states: Massachusetts, Rhode Island, Pennsylvania, Delaware, and North Carolina, but it amounted to nothing more than a nominal registration fee. Thus during this period all suffrage qualifications based upon wealth were swept away and another step toward the attainment of the ideals that underlay the Revolution had been taken.

The very fact that this development removed the most serious restriction on full white manhood suffrage raised new questions. Nobody ever contends that every individual should be given the right to vote. The elimination of the property-owning and tax-paying qualifications tended

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to open the ballot box to groups that many believed were not properly qualified to vote and consequently led to the adoption of a new type of limitation on suffrage rights. During this period the franchise rights of the free Negro and the alien were the chief points of controversy thus created.

The abolition of slavery in the Northern states gave prominence to the question of Negro suffrage. Although the controversy was often heated, the opposition was so general that in 1860 there were but six states, New York and five in New England, where the Negro was not excluded from the ballot box. The steadily increasing number of immigrants and the fact that so many settled in the cities where they were used by the political rings that sought to control local politics, such as Tammany Hall, gave rise to the question of the alien vote and this occupied the foreground in suffrage controversies between 1845 and 1860. The opposition to aliens centered in the Northeast and led to the rise of the Native American or Know-Nothing party which attained its greatest strength in the middle fifties.

In the Northwest, however, the states took a different attitude for they wanted settlers and sought to attract the immigrant. Thus the economic conditions there, just as in the colonies, tended to hasten the granting of more liberal political rights. Though few immigrants settled in the South, that section was generally opposed to extending suffrage rights to these aliens, owing to the belief that they were generally opposed to slavery. In 1860 six states, chiefly in the Northwest, allowed aliens to vote; the majority of these required but six months' residence in the state, whereas in most states a residence of one year was required. The broadening of the suffrage also led to provisions designed to exclude bankers, criminals, idiots, and the insane as being undesirable. Soldiers were excluded through the fear that where any considerable number were stationed they might control local elections. Though a demand for the extension of the suffrage to women, connected with the general agitation for woman's rights, suddenly developed after the first woman's convention in 1848, it received support from so small a group that no tangible results were obtained and women continued to be excluded from the ballot box. By 1860, therefore, white male citizen suffrage was practically universal and all in this group were in a position to protect their economic or other interests as far as the free exercise of the right to vote permitted. The effects upon economic legislation of the changes that during this period eliminated all forms of wealth requirements as a qualification for voting were far-reaching.

The Developments in State Government. The outstanding feature in the changes made in the state governments during this period was the move to give the people a more direct control of affairs. This movement was steadily gaining headway after about 1800 but became most marked

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after 1830 under the stimulus of Jacksonian democracy and the organization of new states in the West. Various devices were employed in furthering this development. The process of amending the state constitutions was made easier and frequent constitutional conventions made possible more sweeping changes; the practice of submitting both amendments and new constitutions to the people for final approval became customary. Property and religious qualifications for office holding disappeared along with those for suffrage and, more and more, state officials were chosen by popular vote instead of appointment. Judges of the courts were made elective and their term of tenure limited. A bicameral legislature, usually meeting every two years, became customary and efforts were made to adjust representation in accordance with population changes. But the power of the legislature was increasingly limited through provisions of the new constitutions and by giving the popularly elected governor the veto power, including the right to veto specific items in appropriation bills. The legislatures also lost the choice of Federal representatives and presidential electors, which was granted to the people. Just as in the case of the extension of suffrage rights, this process of democratization went on more slowly in the older seaboard states, where vested interests and mere inertia stood in the way, than in the new states to the west where the traditions established under the Ordinance of 1787 combined with the frontier environment left such a strong impress upon political institutions.

The changing economic life of the time was reflected in the state governments partly in the form of provisions for the assumption of new activities on the part of the states in providing for various wants and partly in regulatory measures designed to curb evils that had appeared in one or another form. Most of these have previously been noted and need only be summarized here as indicating the general trend of development.

Where the state attempted to provide for certain wants it was usually either because the need was one that it was believed the state rather than private enterprise ought to supply, or else because the want was so urgent and the investment required so large or the risks so great that sufficient private capital was not likely to be forthcoming. The latter reason chiefly explains the internal improvements undertaken by the states, such as roads and canals, the use of state credit for railroad construction, and the establishment of state-owned banks. The state activity in these fields reached its height in the thirties, and the succeeding crash of state credit produced a reaction that checked further activities of this type and led many states to adopt constitutional amendments prohibiting them. The former reason was responsible for fewer state activities outside of those that are almost invariably performed by the state, such as the maintenance of courts and the provision for a militia.

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However, the state did require its subordinate political units to provide for certain needs and occasionally, on a limited scale, undertook such provision itself. The provision for education was the most important development of this type; road building was another; care for the poor, criminals, and insane may be included here. More significant as far as state action is concerned were the regulatory measures designed to meet the problems arising from new lines of economic activity. The growth of banking alone gave occasion for a large mass of legislation and on a smaller scale this was true of insurance. Corporation laws were developed to meet the growing need for a form of business organization suited for large-scale enterprises. Such regulation of railroads and other public utilities as was attempted was generally found in the individual charter grants. Labor legislation was meager in amount and seldom really effective.

The Development of Local Government. The desire of the people to exercise a more direct control, which led to making more and more state officials elective, was also a marked feature in the development of local government during this period. In the older states, as well as in the new ones, an increasing number of important county, town, and city officials were made elective. Aside from this there were not many important changes in the local governments of the seaboard states. In the new states to the west the forms of local government closely followed those prevalent in the states of the same latitude to the east, partly because they were chiefly settled by people from those states, partly because economic conditions were more nearly similar.

Thus in the Southwest, with a widely dispersed agricultural population, the county was the dominant unit of local government as it had been in the old South. In the Northwest, where agriculture predominated but where villages and towns were frequent, the system adopted more closely resembled that of the Middle Atlantic states where the functions of local government were more evenly divided between the county and the township, though the county was generally more important and the town was never as predominant as it had been in New England. Throughout the country, when a considerable population had become concentrated in one place, the need for local government of a comprehensive type was provided by the incorporation of villages, towns, or cities.

In the main the activities of these local units of government, both positive and regulatory, were much the same as they had been in earlier times, the most important including the levying and collecting of taxes, the maintenance of law and order, the administration of justice in the local courts, the construction and upkeep of roads, the care of the poor, and the holding of elections. To these functions there were generally added during this period the maintenance and the support of public schools, often placed under a special political unit known as the school district. On

the other hand, with its separation from the state, the support of the church ceased to be a governmental function. Many of the detailed regulatory activities that had characterized the local government of Puritan New England were abandoned and few ever secured a foothold in the more liberal and cosmopolitan states of the West. Large towns and cities as they developed and became incorporated began to assume the more numerous functions of the modern municipality, which increased as the size of the place either made them necessary or rendered their support less burdensome for each individual. Among these activities were lighting, waste disposal and sewerage, the preservation of public health, fire protection, control of, or provision for, water supply, and the maintenance of parks and libraries. As compared with municipal activities today those of this period were very meager. Outside of the field where municipal action became absolutely necessary, such as public health, the community was apt to remain content with relying on private initiative and philanthropy to provide many of these services.

State Finance. The variations throughout the Union were so numerous and the available information on the subject is so inadequate that only rough generalizations can be ventured concerning state, and more particularly local, finance during this period. Up to about 1820 the functions and activities of the states were so limited that their expenses were kept at a low level. As the revenue obtained was generally sufficient to meet all expenses, the amount of state debt outstanding at that date was relatively small. But when, about that time, the states began the policy of aiding internal improvements and banking enterprises with funds obtained almost entirely from the sale of bonds, the state debts began to mount rapidly. In the decade beginning in 1820 about \$26 million state bonds were put out, chiefly for canal construction. In the speculative period that followed in the thirties, this policy ran riot, and nearly \$150 million of bonds were issued from 1830 to 1836. The total debt of the states in the latter year was about \$170 million of which \$60 million had been incurred for canal construction and \$52 million for banking, chiefly in the trans-Allegheny regions.

Had the revenue from these undertakings been sufficient to meet the interest on the bonds, as was expected, there would have been no trouble, but such was seldom the case. Except for the main line of the Erie Canal few of the canals yielded a profit at this time and many never paid. Although the banking enterprises were generally profitable during the boom of the thirties, the crash that followed the panic of 1837 ruined many and left the states with little but a debt to show for their investments. The railroads also, though more generally successful in the long run, were seldom able at the time to earn an adequate return on their cost.

Under these circumstances several of the states which had incurred a heavy indebtedness for such undertakings found themselves seriously embarrassed financially in the early forties. Among this group were New York, Pennsylvania, Maryland, Michigan, Indiana, Illinois, Florida, and Mississippi. In most states interest payments were suspended or made in scrip; Mississippi, Florida, and Michigan, on one excuse or another, refused to recognize some of their debts and fell back on repudiation. The Eastern states resorted to new or increased taxes, but in the Western states there was much opposition to this as their wealth was so small in proportion to their debt. Additional borrowing was resorted to in some cases, but the credit of these states had suffered so severely that this was difficult and very expensive. An effort was also made to get the Federal government to assume the state debts but it was not successful.

By 1850 most of these states had passed through the worst of their financial troubles and, as a result of this experience, eleven of them had adopted constitutional provisions prohibiting the state from lending its credit to, or becoming a stockholder in, such undertakings. Yet this experience did not deter other states from the practice, for in the boom of railroad construction during the fifties many Southern and Western states either endorsed bonds of the railroad companies or issued their own bonds to aid them. Thus the total of the state debts estimated at about \$192 million in 1853 had risen to around \$257 million in 1860.

Had it not been for the burden imposed by this indebtedness, the problem of state finances would have been comparatively simple and unimportant. The general activities of most states, though on the increase, were very limited in scope, and the annual expense of running the state governments and institutions was so small as to impose little burden in the form of taxes. For such revenue as was needed, most states depended chiefly upon the general property tax. This was particularly true of the Southern and Western states. As corporations increased in importance the states began to impose special taxes on different classes of corporations. Banks were first singled out for this purpose and later, in some states, insurance companies; but, unless we add the special provisions for taxation of railroads (sometimes inserted in their charters), these were the only important groups of corporations so taxed before 1860. The reason for this was doubtless owing to the fact that the property of other corporations was mostly in tangible form and subject to the general property tax.

A variety of minor forms of taxation or fees were employed by one state or another at different periods. Auction sales were subject to taxation in some states. There was also some state-owned property that yielded a revenue, in addition to such as was obtained from the state investments in banks and internal improvements, the most important

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being that obtained from the sale of state lands during the earlier portion of the period. Finally, there were the grants received from the Federal government, described elsewhere. From these various sources the states generally obtained sufficient revenue to meet their ordinary expenditures and few went into debt except for temporary borrowings. In 1839 ten of the states—only one of them west of the Appalachians—had little or no debt, and, although some of these subsequently abandoned this policy, the total of those in this happy position had slightly increased by 1860. The temptation to hasten development by internal improvements and the expansion of banking was responsible for the difficulties in state finance during this period; New England, where Massachusetts alone indulged in the practice, but very moderately, was the only section to escape these troubles.

Local and Municipal Finance. No comprehensive data bearing upon local finance are available for this period. However, there is little reason to doubt that the activities of the local units of government were so much more extensive than those of the states that their expenditures must have been considerably greater. Certainly this would be true outside of the states that were engaged in banking and internal improvements. The most important items of expenditure among the towns, villages, and counties were those for streets, roads, bridges, schools, the maintenance of peace and order, support of the poor, public buildings, courts and jails, elections, and general administration.

Nearly everywhere the chief source of local revenue was the general property tax, which was frequently made up of specific levies for the town, the school district, the county, and the state. The total levy of general property taxes for the whole country in 1860 has been estimated at \$94 million, of which sum all but a small portion taken by the states went to local administrative units. Other sources of local revenue varied considerably and were seldom very important, the largest sums probably being obtained from the different license charges and fees. Taxes were generally adjusted to meet the ordinary expenses, but unusual and heavy outlays for such things as public buildings and bridges were commonly met by borrowing through the sale of bonds. Not infrequently, too, the towns and counties, like the states, sought to aid various enterprises, chiefly railroads, and sold their bonds for this purpose.

In the incorporated municipalities, especially the big cities, the more numerous and extensive activities made the problems of finance assume larger proportions. Expenditures for streets, sewers, public health, schools, police, lighting, water, various public institutions, and interest on the debt mounted rapidly. Thus in the largest city, New York, the total expenditures including interest on the debt were nearly \$8,500,000 in 1860 or \$10.52 per capita, a figure over three times the per capita expendi-

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ture in 1830. In Boston the city expenditures in 1860 were about \$3,500,000; in Baltimore, almost \$3,000,000. The larger cities were also beginning to pile up heavy debts at this period. By 1860 New York had a total debt of about \$23,000,000, Philadelphia \$21,000,000, Baltimore \$15,000,000, New Orleans \$11,000,000, and Boston \$8,500,000. In most cases these debts were incurred for local improvements such as streets, sewers, waterworks, and public buildings; in some instances they had been created to aid railroad construction, notably in Philadelphia and Baltimore, each of which had issued about \$8,000,000 of bonds for this purpose. Although the chief single source of municipal revenue was the general property tax, the larger cities frequently obtained considerable revenue from a variety of other sources including such productive property as the water system, license charges or fees, and special assessments for public improvements. Although no figures for the total of local and municipal indebtedness are available before 1870, when the amount was over \$500,000,000, there is little reason to doubt that it exceeded the total of the state debts in 1860 and therefore constituted the largest item in the total of all public indebtedness.

The Development and Activities of the Federal Government. The development and growth of the activities of the Federal government were much more narrowly circumscribed than those of the state governments for the reason that the Federal government exercised only such power as had been expressly or impliedly delegated to it under the Constitution, and amendments of the Constitution were very difficult to secure. Aside from the so-called Bill of Rights embodied in the first ten articles of amendment, the eleventh amendment denying the Federal courts jurisdiction over any suit against a state by citizens of other states or countries, and the twelfth amendment further defining the methods for choosing the President and Vice-President, no changes had been made in the Constitution up to 1860. Consequently such development of activities on the part of the Federal government as occurred during this period was determined by the decision to exercise such powers as had been originally granted to it and by the Supreme Court's interpretation of the extent of the powers so granted.

It was natural that, when the government was first organized under the Constitution, many new lines of activity were taken up, and the fact that the Federalists, who believed in the desirability of extending those activities and in a broad interpretation of the Constitution, were in power only accentuated the tendency. Aside from the obvious and necessary activities of the Federal government such as the establishment of courts, the provision for the army and navy, conduct of foreign affairs, and the levying of taxes, the government established the post-office service, provided for a mint and coinage, and chartered the United States Bank.

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But the widespread spirit of individualism and provincialism reacted against this centralizing tendency and the opposition was increased by the Federalists who evinced much distrust of the masses and were closely connected with the wealthy classes engaged in commerce, finance, and manufacturing.

This reaction led to the election of Jefferson as President in 1800 and the advent into power of the Republican party which stood for a strict construction of the Constitution and a minimizing of the activities of the Federal government. However, the force of circumstances and practical expediency impelled Jefferson and certain of his followers to deviate somewhat from their principles in actual practice. The purchase of Louisiana was accepted in spite of their constitutional scruples; provisions were made for the construction of a national turnpike, though Madison and Monroe put a check upon internal improvements; and a second United States Bank was chartered. During the administration of J. Q. Adams the Federal government was somewhat more active in furthering internal improvements and granting appropriations for rivers and harbors; under Jackson, this activity was once more checked. In the meantime the Supreme Court, under Chief Justice Marshall, had handed down a long list of important decisions about the Constitution which tended to strengthen the powers of the Federal government. But from the time of Jackson's administration the strict constructionist point of view was dominant. The Supreme Court became made up of men who accepted this view. In Congress the growing influence of the South, a section more than ever convinced of the necessity of upholding the doctrine of states' rights in order to protect its economic interest in slavery and a low tariff, was exerted to curb the power and activities of the Federal government. At the same time, however, in order to further undertakings that local and state resources were insufficient to carry on, Congress was frequently besought to aid the states by grants of land or the distribution of Federal funds, and in this indirect manner it continued to play a part in furthering such activities.

Among the activities of the Federal government outside of the more essential may be noted: the survey and sale of the public domain, control of the Indians and their trade, the coast and geodetic survey and light-house service, the consular service, the issuing of patents and copyrights, the bureau of navigation, the census, and the post-office service. It is obvious that for the most part these activities were of a positive character. The regulative activities were reduced to a minimum by the limitations on the powers of the Federal government, the influence of those favoring states' rights and a strict construction of the Constitution, the prevalence of a belief in a laissez-faire policy, and the strong spirit of individualism. Where action on the part of the Federal government was wanted during

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this period, it was generally for the purpose of assisting rather than for controlling the economic activities of the people.

The Finances of the Federal Government. In 1816 at the end of the war the national debt stood at \$127 million, but the revival of foreign commerce, increasing the receipts from customs duties, combined with the growing income from the sale of public land, produced such a surplus of receipts over expenditures that the internal revenue taxes were promptly repealed and a considerable sum was used to reduce the debt. After the panic of 1819 the drop in the receipts from customs duties, the item that had yielded about nine-tenths of the revenue, resulted in a small deficit for three years in the early twenties, but from 1825 on there was an annual surplus of \$6 million or more, most of which was used for reducing the debt. During the business prosperity of the thirties, and in spite of greater expenditures, this surplus rapidly mounted, owing to the increased

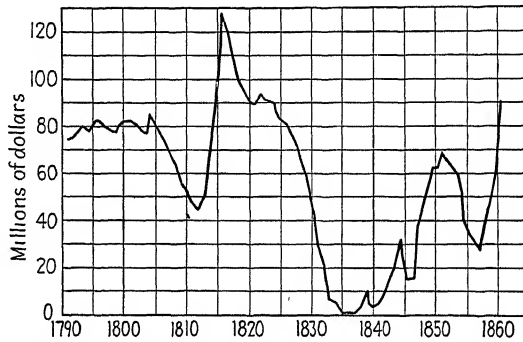


FIG. 27.—Principal of the national debt, 1790-1860.

receipts from customs duties and the enormous sale of public lands. This was the only period in our history when the receipts from the sale of public lands became an important item in the government's revenue; in the year 1836, for the first and last time in our history, they actually exceeded the receipts from customs duties; for the whole of the decade they contributed about one-quarter of the total revenue. This surplus made possible a rapid reduction of the national debt which, by 1835, had disappeared. For a youthful country to extinguish its debt so promptly was looked upon as a great achievement which did much to establish the nation's credit in Europe.

The states had long been viewing with envious eyes the prosperous condition of the Federal treasury so that, when the debt was paid off and the revenue continued to pour in, thus raising the problem of what to do with the surplus, they were fully prepared with an answer. As has previously been pointed out, this problem was tied up politically with the questions of the tariff, public lands, and internal improvements, which all

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reacted upon the fiscal condition of the government. The solution adopted in 1836 took the form of an act distributing among the states the surplus above \$5 million in the treasury on Jan. 1, 1837, which amounted to

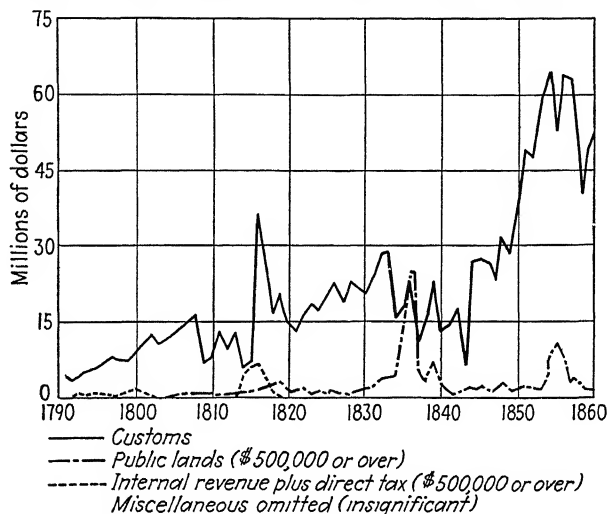


FIG. 28.—Ordinary receipts of the Federal government, 1791–1860.

about \$35 million. Though technically this took the form of a loan, to overcome the constitutional scruples of some, it was generally understood that the states would not be called upon to return it and they never have.

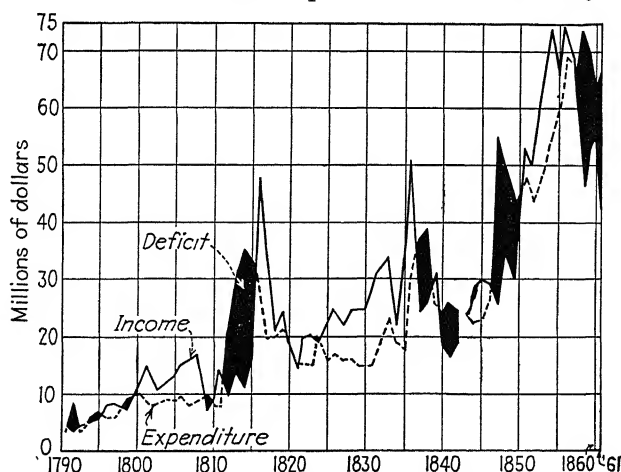


FIG. 29.—Total ordinary receipts and expenditures of the Federal government, 1791–1861.

The distribution was to be made in quarterly installments, during 1837, but on the outbreak of the panic the government's revenue fell off and a deficit appeared so that payment of the fourth installment was stopped.

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An annual deficit continued, except for one year, until 1844 and in consequence the government again went into debt. The Mexican War, which broke out in 1846, did not entail any serious financial strain. It increased the expenditures for the army and navy about \$64 million; but no attempt was made to raise additional revenue by taxation and such funds as were needed were obtained by borrowing, the debt being increased about \$60 million thereby, so that the total in 1848 amounted to \$63 million. It is to be noted that at this time, in marked contrast with the situation during the War of 1812, the government was able to dispose of its 6 per cent bonds at par or above and that they were sold for specie, so great had been the increase in the nation's wealth and the improvement in its credit.

In the following prosperous decade the customs receipts, which still contributed approximately nine-tenths of the revenue, more than doubled; there was also a considerable increase in the receipts from the sale of public lands. The flush condition of the treasury, as is always the case, led to a rapid increase in expenditures. In the decade of the twenties the total annual expenditures of the Federal government had fluctuated around \$16 million; in the forties the average was about \$25 million; in the fifties this was more than doubled. By far the greater portion of these expenditures, approximately three-quarters of the total, was incurred for purposes of defense, including under this head the maintenance of the army and navy, pensions, and interest on the debt. The increase during the fifties was chiefly in the appropriations for the army and navy, the Indians, and for various branches of the civil administration. The greatest relative increase was in the last item, notably in the appropriations for public buildings and the lighthouse service, and this reflected the steady expansion of the government's activities. As a result the total expenditures of the Federal government rose to \$74 million in 1858; previous to 1812, they had only twice exceeded \$10 million. In spite of this increase there was an annual surplus available for reducing the national debt so that by 1857 only \$28 million remained outstanding. The panic of that year, as usual, brought a heavy falling off in the receipts and resulted in a deficit, which continued through the remainder of the period and necessitated further borrowing, so that by 1860 the debt had risen to \$64 million.

The almost complete dependence of the government for revenue upon a source so subject to great fluctuations as customs receipts is most undesirable. This condition was again illustrated at this time. Since the bulk of the expenditures was relatively fixed, or at least not subject to similar changes, the fluctuations in receipts resulted either in a large surplus, which tempted Congress to extravagant expenditure, or in a deficit, which forced the government to borrow. At the same time it led to changes in the tariff duties which had a disturbing effect upon business.

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The lack of any system for drawing up a regular budget for the Federal government only aggravated these difficulties.

Summary of the Country's Economic Development, 1816 to 1860. Having completed the account of the country's development in various phases of economic activity during the period 1816-1860, we can now briefly summarize its outstanding features for the purpose of obtaining a clearer picture of the progress that had been made in enabling the people to satisfy their material wants more completely and more economically. This progress was attained chiefly through (1) increasing the economically available supplies and improving the quality of the various agents of production, natural resources, labor, capital, and business management; (2) the increase in knowledge secured by the advance in the natural and social sciences; and (3) the development of economic or other social institutions which introduced more efficient methods in the organization of industrial society. These factors will be taken up in the order named.

The nation's natural resources were largely augmented during this period by the acquisition of new territory—Florida, Texas, Oregon, California, and the Gadsden Purchase. Though enormous in extent much of the region so obtained, on account of its semiarid character, was unsuited for ordinary methods of agriculture, and was incapable of sustaining economically so dense a population as most of the rest of the country. It did, however, contain certain resources in the way of forests and minerals which were an important addition to the nation's supply of raw materials. As settlers poured into the West, occupied the rich lands of the Ohio and Mississippi valleys, and established scattered settlements in the Far West, the natural resources of the country became better known and made a rapidly increasing contribution to the national income and wealth.

The growth of the labor supply was primarily a product of the natural increase of the population, which continued at a high rate throughout this period, but this was augmented by the large inflow of immigrants. The result was that by 1860 the population had surpassed that of the United Kingdom and was not far behind that of France or Germany. The spirit of work which characterized the people continued unabated and the spread of education helped to increase the efficiency of the workers. Yet the demand for labor kept pace with the supply so that, compared with Europe, labor still remained a relatively scarce factor of production. The supply of capital goods also was being increased at a very rapid rate, chiefly by the savings accumulated from the increasing national income, and only to a small extent by the inflow of foreign capital; but in this case also the demand kept pace with the supply and capital remained scarce.

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The development of an able group of men for business management was furthered by the conditions of the time. The facts that there was no social taboo upon engaging in business and that the accumulation of wealth was increasingly recognized as a road to power and social prestige attracted many of the ablest men into business. The unusual economic opportunities being opened up, combined with the freedom of individual initiative, permitted and helped to foster the full development of their abilities in this field of endeavor. The lack of stratified classes and the relative mobility of movement between economic groups made it easier for latent ability to be developed and used; the ambition, energy, and adaptability of such people favored success, and the optimism that induced them to take great risks was frequently justified by the remarkable rapidity of the country's development.

The increase in the mere physical supply of these factors of production, enormous as it was, did not constitute the greatest factor in promoting the economic well-being of the individuals who made up the population. However, it was of the utmost importance in building up the economic resources and political power of the United States and in giving the country a position among the more prominent nations of the world. More important in promoting the economic progress of the individual was the advance made in the methods in which these factors were employed in the production of economic goods and services due (1) to the progress of science and (2) to the evolution in the organization of industrial society. Nor should it be overlooked that the very increase in the supply of the factors of production was in no small measure a product of these other developments.

Concerning the progress of knowledge in the sciences and its application, little has been recorded in the preceding chapters; yet this was one of the most important factors in promoting the increase in the production of wealth and in the economic progress of the individual. In chemistry, physics, and geology discoveries were being made that gave man a better understanding of his physical environment and thus enabled him to make greater use of the forces and resources of nature—to cooperate more effectively with nature—in the effort to supply his wants. As this knowledge was applied in mining, metallurgy, or engineering, and took form in innumerable inventions, only a few of which have been mentioned, it transformed the methods of producing wealth. These developments underlay the growth of mining, the revolution in methods of transportation, and the rise of the factory system in manufacturing. Progress in the biological sciences furthered the introduction of better methods in agriculture, and the advance of medicine played a part in augmenting the labor supply of the country.

The increased attention given to the study of the social sciences such as history, government, and economics helped to develop a better under-

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standing of man's social process and of the conditions under which social institutions could be made to function most effectively. In economics, which is commonly said to have begun as a scientific study only with the publication of Adam Smith's "Wealth of Nations" in 1776, marked progress was made in the formulation of its principles and their application to current problems. Though the subject began to be taught in the colleges there was widespread neglect or ignorance of its principles, and the complexity and imponderability of the factors entering into economic problems made the application of its principles to the solution of those problems extremely difficult, even for the most expert.

The evolution in the organization of industrial society that took place during this period was primarily determined by the results of the progress achieved through the advance in the sciences. The outstanding feature in that evolution was the tendency toward increased division of labor and specialization of functions which is evident in every phase of economic activity. In the use of the different factors of production this tendency is reflected in the case of natural resources where each section of the country specialized to a greater extent than ever before in producing those products of the extractive industries for which it was economically best fitted. As the area within which this territorial specialization existed was extended so as to include the greater portion of the United States, to say nothing of other countries, it increased the chance for obtaining each product still more economically. In the case of labor the numerous processes once performed by the artisan and mechanic were being divided up among workers, each of whom carried on only a few or perhaps one process, and machines took over other processes. The growth of different classes rendering personal services and the rise of the highly trained professions illustrate the same point.

The forms which capital took were also more specialized; the machines which invention devised were only highly specialized tools; buildings also became more specialized in construction and uses. As the size of business undertakings grew and the problems of organization became more complicated, greater specialization in the performance of the varied functions of business management became necessary to success in the conduct of these enterprises. The growing use of the corporation simply reflected the advantages of a form of business organization where there was greater specialization of the functions of owner, creditor, and manager than in the simpler form of organization. Finally, as will be described shortly, this specialization in the use of the factors of production led to specialization in the methods and institutions through which the economic activity of the country was carried on.

This specializing tendency was a product of various factors, most of which are covered by the common statement that specialization is limited by technological processes and by the extent of the market. As already

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suggested, it was the progress in science and invention that improved the technological processes so as to make greater specialization possible. But specialization is not economical unless goods can be produced upon a large scale. The cost of the plant and machinery is so great that this overhead must be spread over a large volume of output to reduce the cost for each unit of product to a low level. Hence large-scale production will not be attempted unless there is a large market in which to dispose of the product. Consequently, in order to take advantage of the full degree of specialization made possible by technological improvements, there must be a widening of the market; in fact each reacts upon the other to further the process.

The extension of the markets for goods during this period was a product of various factors each of which reacted upon the others. The growth in the per capita national income would have enabled even a fixed population to consume more goods. Added to this, however, was the great growth of population within the country, not to mention the growth in the other countries with which we traded. Both of these developments increased the market for goods within a given area. Finally the market for most commodities was enormously expanded by the reduction in the costs of transportation and marketing which increased the area within which it was economically possible to sell. The great progress along these lines that marked this period need only be suggested. The spread of roads and turnpikes, the introduction of the steamboat, the opening of canals, and, most important of all, the construction of railroads revolutionized the trade of the country. Flour, which in 1790 could not stand the cost of transportation from Pittsburgh to Philadelphia, could be shipped from beyond the Mississippi to Liverpool in 1860. Many products that had formerly enjoyed only a local market found that their market was extended so as to be national or even international in extent. The improved facilities for communication were also of aid in extending the market. The development of the post-office service together with the reduction in postal rates, the instant connection between the different parts of the country provided by the introduction of the telegraph, the lowered costs of printing, and the rapid growth of newspapers brought a steadily increasing number of buyers and sellers into closer contact, intensified competition, and lowered the costs of carrying on trade.

Finally, as trade increased in volume so that greater specialization in the performance of various middlemen's functions became economical, there arose numerous institutions and groups of individuals engaged in carrying on these specialized activities. Wholesalers and retailers, brokers, commission houses, jobbers, traveling salesmen, importers, exporters, and produce exchanges first appeared or became more common in one or another branch of trade. Through the greater efficiency so secured a

further reduction in the cost of the middlemen's services was made which, along with the other developments of this period, increased the extent of the market and furthered the movement toward specialization.

The developments in the field of financial institutions that took place during the period were most important. A fairly adequate supply of specie for the circulating medium was secured, though not until the last decade of the period. There was a marked improvement in the character of the paper money that circulated in most sections, even if the bank notes were still defective in many respects in 1860. The rapid spread of banking institutions, the beginnings of specialization illustrated by the appearance of savings banks and trust companies, and the steady though slow improvement in banking methods and practices wrought a vast change in the conditions under which financial transactions were carried on. The development of the real-estate mortgage business, the introduction of stock exchanges, and the growth of various forms of insurance brought similar results. By means of such developments the accumulation of capital was stimulated and its flow into the most productive uses was facilitated, both by increasing its mobility and by providing more intelligent guidance in its investment. At the same time domestic and foreign trade were aided by the improved facilities for carrying out the financial transactions involved.

The part played by the state and political institutions in this economic progress must not be overlooked, although the policy of *laissez faire* and freedom of individual initiative was dominant at this time. Where conditions were such that individual enterprise seemed unable or unwilling to finance undertakings deemed of great importance, the people fell back upon the resources and credit of the state, without which many of these undertakings would have been impossible at the time. In the very limited field of economic activity left open to it under the Constitution and the dominance of strict constructionist political parties, the Federal government was narrowly circumscribed in action directly furthering economic development. Aside from providing protection and maintaining peace and order, it was chiefly influential in aiding trade, both domestic and foreign. It negotiated commercial treaties, established the consular service, the lighthouse service, and expanded the post office, made limited appropriations for river and harbor improvements and the national turnpike, and maintained freedom in interstate commerce. In other fields it provided the protective tariff, chiefly for manufactured products, opened up the public domain, established the two United States Banks, and in a limited way promoted science and the arts, not to mention numerous less important activities. The states and local political units were performing more functions in furthering economic progress: in the positive form of providing goods and services, such as education, local improvements, or support

of the poor; and in the negative form of regulation and control, such as the maintenance of peace and order, safeguarding public health, supervision of banks, and insurance companies. These activities were numerous; yet throughout the period they remained very much less numerous and important than they are today.

In closing this brief summary of the growth in the economic resources and the developments in the organization of industrial society in the country during this period, certain important results that followed therefrom may be noted: (1) the rise of a national economy, (2) the attainment by the United States of a position among the world powers, (3) the new economic problems arising from the changing industrial society.

The concept of a national economy is not sharply definable but it implies a situation where much the larger portion of the economic goods consumed in a country is produced within that country and where there is such a degree of specialization between different sections of the country that there is a large volume of trade between them. The general trend in our economic development during this period was toward such an economy. Though no figures are available, it is evident that the internal trade of the country was far greater than the foreign trade. At no other period was foreign commerce a less important factor in the economic development of the country than during these years. Among important domestic products cotton was the outstanding exception to the general rule that domestic consumption absorbed most of the output, though during the last of the period tobacco, grain, and livestock products were becoming increasingly dependent upon foreign markets. Our dependence upon foreign goods was most marked in the case of manufactured products, notably textiles, iron, and steel; but the rapid growth of domestic manufactures considerably reduced that dependence during the period, and was an important factor in the development of greater national self-sufficiency.

Within the country the tendency toward sectional specialization and intersectional trade was most marked. The Northeast specialized in manufacturing, commerce, and finance; the Northwest in raising grain and livestock; the South in growing cotton, tobacco, and sugar. The South and Northwest obtained manufactured goods from the producers or importers of the Northeast and in part depended upon that section for financial assistance and the carrying on of trade. The Northeast obtained raw materials and food supplies from the other two sections. Thus a close interdependence of these sections based upon specialization and trade was built up. The relatively undeveloped Far West played a less vital part in this national economy, though even there specialization in mining and agriculture prevailed and there was considerable trade with the rest of the country. Finally, it is to be noted that, although this specialization

tended to intensify the conflicts in economic interests among the different sections, it also tended to increase the bonds of economic interests which held them together, and to that extent helped to counteract the individualistic and decentralizing forces in the political life of the time.

Progress in the arts and sciences has made success in warfare and political power increasingly dependent upon economic resources as compared with mere man power. The economic development of the United States during this period, as compared with that of the leading nations of western Europe, was such as to establish it firmly in a position among the world powers of the time. At the opening of the nineteenth century, in population and economic resources, the United States ranked far below the leading nations of Europe; by 1860, this position was completely altered. By the latter date the area of the United States had been increased to a figure many times that of any nation in Europe outside of Russia, and our natural resources, though relatively less developed, were vastly greater than those possessed by any of those countries. The growth of population in the United States had been so rapid that by this time the number of inhabitants exceeded that of Great Britain and was only slightly below that of France or Germany.

In agriculture and other extractive industries the position of the United States would compare favorably with those other nations. Even in manufacturing, the field in which the country had been most backward, it could be ranked among the important countries by 1860; for, though distinctly inferior to Great Britain and deficient in lines of manufacturing where labor costs were large, it was ahead of France or Germany in the use of machine methods, and could claim that most of the more important branches of manufacturing were firmly established. The transportation system in the more densely settled region east of the Mississippi, if not so intensively developed as that of western Europe, was not seriously inferior in general efficiency. The merchant marine was not far behind that of Great Britain, and much larger than that of any other nation; in volume of foreign commerce Great Britain alone far surpassed the United States. This brief summary of the more salient facts indicates that by 1860 a new economic power had arisen among the nations and, upon the basis of this development, the United States was then recognized as entitled to a place among the great political powers of the world.

Yet the advance in the material condition of the population and the growth in the wealth and political prestige of the nation during this period did not take place without attendant evils. The innovations that contribute to progress are seldom productive of unalloyed benefits; and it could not be expected that the great changes in the organization of industrial society that took place would not be accompanied by some undesirable results and create new problems of control and readjustment

in social institutions. The more important problems that thus arose have been suggested previously and a brief summary will suffice here.

The growing scale of business enterprise illustrated by the introduction of the factory system, public utilities, and railroads widened the gulf between the employer and his employees and in many ways altered the conditions for the workingman. At the same time the greater use of fixed and specialized capital increased the difficulties in the organization and control of various branches of industry. The development and increased use of the corporation as a form of business organization created another problem of control. The growth of banking and other financial institutions led to the appearance of new problems in the use of these highly sensitive and easily abused mechanisms in our economic organization—more especially, the business cycle. The expansion of markets intensified competition and made it evident that keen competition was not without some disadvantages. The increase in specialization with its resulting interdependence and greater complexity in the organization of industrial society not only tended to make the problem of management of private enterprises more difficult but had the same effect upon the problems of social control of industrial society. At the same time the extension of franchise rights, by giving a much larger and presumably less well-educated group a voice in the affairs of government, though in accord with the democratic ideals of the country, was not without certain drawbacks. Finally, the development of a national economy and the consequent increase in the number of economic problems that were national rather than state or local in character was certain in time to bring to the front the question whether the existing framework of government provided the best distribution of powers for meeting these problems and furthering the economic progress of the nation.

The economic development of this period did not make clear the full scope or character of the various problems it was creating. For the most part the events of this period only foreshadowed the importance that these problems were to attain in the following period. Only by keeping in mind the changes in the organization of industrial society and the nature of the evolution that was taking place can we understand the character and the widening scope of these problems as they developed in the succeeding period, to which we now turn.

PART IV

THE END OF THE WESTWARD MOVEMENT AND THE GROWTH OF CAPITALISTIC INDUSTRY

CHAPTER XXVII

THE PERIOD IN GENERAL AND THE WORLD BACKGROUND

Outstanding Tendencies. In Chap. XVI dealing with the general background of the preceding period certain outstanding tendencies affecting the economic development of the world during the nineteenth century were mentioned. The particular characteristics of these tendencies and the way in which they reacted upon the economic development of the latter portion of the century must now be noted.

Most fundamental and far-reaching in its effects among all these tendencies was the progress in science and its application in inventions. In all the sciences—natural, biological, and social—the advance in knowledge proceeded at a rate unparalleled in history; the acceptance of the scientific point of view spread rapidly and an ever increasing amount of wealth was made available for the advancement of science and for spreading a knowledge of its achievements over the world. Hitherto unknown or unused resources and forces of nature were made use of for supplying man's needs; and the more effective guidance in cooperating with nature, which science provided, enabled the world to supply its existing wants, to say nothing of many latent and undreamed-of wants, more completely than ever before. At the same time this advance in knowledge made possible more effective cooperation between men throughout most of the world in carrying on their economic activities. The spread of railroads, barely started by 1860, opened up vast continents; the development of the steamship made the oceans less formidable barriers than small seas had been before; the extension of the telegraph, the introduction of the cable, the telephone, the wireless, the radio, made distant communication a matter of minutes instead of months. Innumerable economic and other social institutions developed to further a more effective cooperation among men in the process of supplying their economic wants. Increasing wealth made possible greater savings and in many countries each genera-

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tion added to the accumulated capital and wealth handed on to the succeeding generation. In the more advanced nations modern capitalistic industry arose in all its magnificent powers; it transformed the organization of industrial society; but it brought in its train problems among the most difficult that confront the world of today.

It was chiefly by means of this economic progress that the rapid increase in the world's population was made possible. By 1900 that population was estimated at about 1,500 million of which over one-half was in Asia and over one-quarter in Europe. Two centuries earlier the world's population was around 1,000 million and, although accurate figures are lacking, it seems clear that most of the increase that took place during that interval was in countries under, or largely influenced by, Western civilization. Between 1860 and 1900 the population of Europe rose from less than 300 million to almost 400 million so that in the course of the century the population of that continent had somewhat more than doubled.

In supplying the economic needs of this vastly greater population the larger portion of the increased annual output of wealth, which, of course, was in part made possible by the growth in population, was consumed. Yet the increase in wealth-producing capacity was sufficient at the same time to raise the actual standard of living of no small proportion of the people. In fact the desire to raise the standard of living still higher was becoming a factor in checking the rate of population increase among the more advanced nations where, in the latter part of the century, the birth rate showed a declining tendency. But the people of Europe also contributed through the steadily growing volume of emigration during this period, increasingly drawn from south-central and eastern Europe, to the population and economic development of other continents. In this way, as well as in many others, the growth of population in Europe had important reactions on the economic development of the world.

The increase in the accumulated wealth and capital, particularly in Europe, was of far-reaching economic significance. It made it possible for the people of Europe to buy many more things that were the products of other continents and it enabled such countries as England, France, and Germany to export capital to the less developed countries of the world, thus making another contribution to the economic advancement of those countries.

The tendency toward greater economic freedom, which had been especially marked during the first half of the century, was furthered in many ways by the economic developments during the latter part of the century. Better means of transportation and communication, the spread of education, the development of financial institutions, the progress made in abolishing slavery or serfdom, and the extension of greater

political rights to the people, all helped to increase the mobility of labor, capital, and business management. But the trend toward a policy of *laissez faire* in the relation of the state toward industry may be said to have been reversed in the latter quarter of the century. Originally in no small measure a product of the rapid changes in the organization of industrial society, which necessitated the casting aside of the elaborate system of regulation and control that had developed in earlier centuries, much had been accomplished in meeting this need during the century preceding about 1875.

The reaction against the *laissez-faire* policy became more noticeable during the last quarter of the century and can be traced to various causes. Most important among these was the group of new problems arising out of the changes in the organization of industrial society, for by this time the undesirable results which accompanied those changes had attained such prominence and such general recognition that the state was being increasingly called upon for action involving regulation and control. Other causes are to be found in the intensification of conflicts of economic interests between nations that accentuated the spirit of nationalism, and in the rising power of the masses seeking greater industrial democracy.

Though the growth in the spirit of nationalism could be traced for several centuries, it became accentuated during the latter part of the nineteenth century. Political developments such as the unification of Italy, the organization of the German Empire, and the transformation of Japan furthered the tendency. The economic development within different countries helped to knit the people together through increasing the bonds of common economic interest, replacing a local or provincial economy by one that was national in scope, and augmenting the power of the central government. Governments in increasing measure resorted to a policy of strengthening the nation economically and a new type of mercantilism developed. The effort to make the nation more nearly self-sufficing led to economic imperialism and a renewal of the active struggle for colonial empire. International economic competition became keener and the causes of conflicts in economic interests more numerous. The various ways by which the economic development of the period contributed to bring about this result will be made clearer after a brief survey of that development in the leading nations. Here it will suffice to note that the interaction between economic and political developments that accentuated this spirit of nationalism took a heavy toll of the world's wealth to support the growing burden of armament, played no small part in the events that culminated in the first World War, and today constitutes one of the world's great problems.

Finally, there was the great force of the growing spirit of democracy demanding more liberty and greater equality of opportunity in both

political and economic activities. As economic conditions improved and education spread, new wants developed and new or latent ideals were aroused among the people; the masses brought into closer contact, especially in the cities, began to organize and became more articulate; groups demanding wide-sweeping reforms such as the trade unionists, the socialists, and the communists grew in power, and slow yet steady progress was made in extending to the people a greater voice in their government and in introducing reforms designed to secure a greater degree of industrial democracy. To such power had these groups attained that in the twentieth century we find the communistic bolshevik regime in control of Russia and a labor ministry at the head of the government in Great Britain, an outcome that would scarcely have been deemed credible in 1860, so rapid had been the development of this movement and so widely ramified its effects upon industrial society.

These nineteenth century tendencies, so outstanding in their reaction upon the economic life of the time, were chiefly felt in the world of Western civilization. Partly as illustrating their reactions in the leading countries of western Europe, partly because the economic development of those countries was especially significant in the development of the United States, and partly for the reason that our remarkable progress and its relations to the economic world of today can be appreciated only by a comparison with the progress of those countries, we now turn to a brief summary of the economic history of England, France, and Germany during the half century preceding the outbreak of the first World War; a summary which, however, will be confined chiefly to the developments that were of most significance because of their international reactions.

England. The trend in the economic development of the United Kingdom during this half century was along the lines established in the preceding period. The tendency toward specialization in manufacturing, commerce, and finance was dominant; and the resulting international economy steadily increased the number of ties that made the country dependent upon constant contact with the rest of the world. It was only by means of specialization in these lines that it was possible to provide a living for the rapidly growing population. Though the population of Ireland steadily declined until in 1911 it was only a little over 4 million, or practically one-half of what it had been before the great famine, the total population of the United Kingdom rose to over 45 million in that year, representing an increase of 50 per cent since 1861. In England proper the population had more than quadrupled since 1801. By the opening of the twentieth century the United Kingdom had surpassed France in the number of its inhabitants, though in the middle of the eighteenth century the latter had more than twice the population of the former. At the same time the country was contributing through emigration to other lands,

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chiefly the British colonies and the United States, an average of almost 200,000 people a year after 1850.

For British agriculture this period was destined to prove most trying. In spite of the repeal of the corn laws, prices remained fairly high and agriculture was generally prosperous until about 1875; following this came two decades of serious depression resulting in widespread changes. A series of unusually poor crops aggravated the difficulties. More fundamental and permanent as causes were the steadily increasing proportion of foodstuffs imported from other continents than Europe and the rapid decline in the cost of transportation. By the seventies over half of the

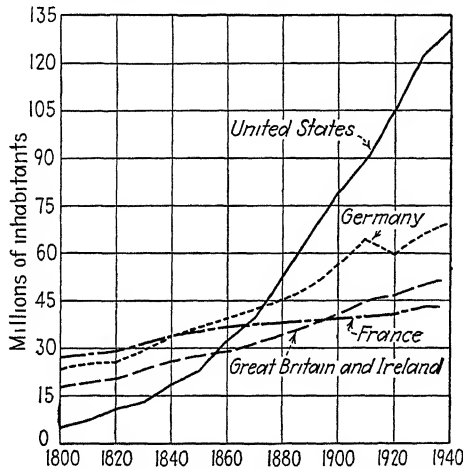


FIG. 30.—Increase of population in the United States, the United Kingdom, Germany, and France since 1800.

wheat imports were coming from these sources and by 1900 seven-eighths. At the same time the introduction of refrigeration made it possible for the fresh-meat products of distant lands to invade the English market. In the face of this competition from newly developing continents British agriculture was forced to resort to still better methods of cultivation and to give more attention to dairying, market gardening, or fruit growing, where the competition was less severe. By the twentieth century, as a result of these changes and higher prices, the condition of agriculture became more prosperous. Oats, wheat, and barley in order were the chief grain crops, potatoes and turnips the chief vegetables, and sheep and cattle the most numerous livestock. Intensive methods prevailed and two-thirds of the number of holdings were under 50 acres in size.

An outstanding feature was the very small proportion of owners who worked their farms, only one-eighth of the total, in spite of efforts made to increase the number. In England proper the number of agricultural laborers declined one-third during the last half of the century; in 1901

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only about one-tenth (for the whole United Kingdom one-eighth) of the male population earned a living through agriculture as compared with four-tenths in 1800. Meanwhile the growth in population was such that during the first decade of the present century that country was importing almost four-fifths of its wheat supply and two-fifths of its meat. It is said that the usual supply of food on hand within the country was sufficient for only about seven weeks. The danger involved in this situation was only too vividly impressed upon the country during the first World War; yet this was inherent in the line of economic development that made modern industrial England possible.

In manufacturing at the middle of the century England led the world both in advanced technological methods and volume of output. Although the century had not ended before this position of leadership was seriously challenged, it was the continued success in the development of her manufacturing industries that afforded the main basis for her economic progress. The leading branch of manufacturing was the iron and steel industry together with the related machinery, engineering, and shipbuilding trades. This was closely connected with the mining industry, especially coal mining, which showed the greatest growth among the country's mineral products during this period. In fact coal was by far the most important natural resource of the country in its influence upon the nation's development. Iron mining was next but, although the output was increased, the country was forced to import a steadily rising proportion of the ore used in manufacturing. The same was true of tin, where the domestic production remained nearly stationary. Lead and salt continued to be produced in considerable amounts but the output of copper became negligible.

Next in importance to iron and steel and the related trades came the textile industry. Among its branches the manufactures of cotton and of wool were far in the lead; these were the only important branches to show marked growth. Following the textile industry in importance was the group engaged in the manufacture of food, drink, and tobacco. The first Census of Production for year 1907 showed a net output of over £700,000,000 with nearly 7,000,000 employees. This included mining, quarrying, building construction, and local public utilities. Adding to the number of employees about 1,250,000 estimated as not covered by the returns (with an output of not over £50,000,000) and 860,000 for employers and those working on their own account brings the total up to 9,110,000, a figure between three and four times the number engaged in agriculture. It would thus appear that nearly one-half of the 20,000,000 people estimated as engaged in work in the United Kingdom were to be found in these industries. Perhaps this is the best indication of the relative importance of these activities in the economic life of the country.

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The history of England's commerce during this period is largely a product of the course of development in agriculture and manufacturing. The growth in the value of the foreign trade was fairly regular except for about a quarter century (a period of falling prices) after 1872; by 1910 the value was more than triple that in 1860. Throughout the period this foreign trade considerably exceeded that of any other country. The balance of trade, which had become unfavorable in the fifties, steadily rose in amount and after the close of the century was fluctuating around \$750 million a year—a fact that belies the widespread notion that an unfavorable balance is really injurious. Except for coal the exports were chiefly manufactured products and the imports were raw materials and foodstuffs. Approximately a third of the foreign trade was with other parts of the British Empire. The policy of free trade was continued, with but slight modification toward the close, throughout the period though, beginning in the nineties, there appeared an active agitation for protection, owing to the nearly stationary position of exports, the reaction towards higher protection in other countries, and the desire for a system of imperial preference. The merchant marine grew even more rapidly than the foreign commerce. By the first decade of the present century the United Kingdom was building two-thirds of the world's ships, owned one-third of the world's merchant marine tonnage, and carried over one-half of the ocean-borne commerce of the world. At no other period in modern history, with the exception of the Dutch supremacy in the early seventeenth century, has any nation been so dominant in the ocean-carrying trade of the world.

It was chiefly upon the expanding manufactures and commerce that the growth in the country's capital and wealth was based. The increasing output made possible greater saving until in the twentieth century the annual savings had risen to over \$1,500 million a year. Aided by this accumulating capital and the development of her financial institutions England remained the great financial center of the world. As this capital accumulated a steadily increasing volume flowed out of the country in search of investment in less intensively developed regions where the opportunities for obtaining a higher rate of return were greater. By 1910 the total of these foreign investments was estimated at \$17,500 million, a little over one-half being in countries outside of the Empire, and approximately \$800 million was being added annually to this sum. The income from this source and from the carrying trade was more than sufficient to meet payments due on account of the unfavorable trade balance. A rough estimate of the country's wealth shortly before the first World War placed it at around \$86 billion, or greater than that of either France or Germany. Considering her limited area and natural resources the growth of England's wealth during the nineteenth century was a re-

markable achievement. The result is the best proof of the wisdom of the underlying policy of specializing in manufacturing and trade; for only thus was such economic growth made possible.

Nonetheless, the small area of the British Isles set some limitations upon the economic development within the United Kingdom. By the twentieth century the still more rapid development of other nations with greater area and resources had deprived the country of the preeminent position among the economic powers of the world which it had held during the greater portion of the nineteenth century.

France. Compared with that of the other leading nations the economic development of France during the half century following 1860 was slow. The brief Franco-Prussian War ended in the imposition of a heavy indemnity and the loss of Alsace-Lorraine with its valuable iron ore and potash deposits; it helped to increase the national animosities that resulted in the assumption of an enormous and continuing economic burden for the purpose of armament. One of the most significant features of the period was the very slow growth in the country's population, the net gain being barely 10 per cent in all, so that by 1910 the total was less than 40 million. There was very little emigration and the declining birth rate, probably chiefly due to the desire to raise the standard of living, combined with a none too low death rate, was mainly responsible for this result.

Although agriculture still remained the chief pursuit of much the largest group among the people, it declined relatively. The proportion of the population classified as living in rural districts fell from around 70 per cent to 50 per cent. Approximately three-fifths of the holdings were operated by people who owned them; their size showed little change and remained extremely small, more than a third being less than $2\frac{1}{2}$ acres and five-sixths less than 25 acres in extent. By the eighties the agriculture of France, like that of other countries of western Europe, was beginning to feel serious foreign competition; but unlike England, the country promptly resorted to protective tariff duties. Thus protected, the agriculture of the country underwent less of a transformation than in England, a somewhat more commercial basis generally and the increase in dairying and market gardening being the most noticeable changes. Except for sheep there was a moderate increase in livestock and the wheat, oats, and barley crops also rose. The cultivation of sugar beets advanced rapidly, but the important viticulture suffered severely through pests from which it had scarcely recovered at the end of the period. Silk culture declined following the opening of the Suez Canal and heavy importations from the Far East. It was not until near the end of the century that much progress was made in introducing such machinery as was suitable and, though the general methods of cultivation showed improvement, they were seldom up to the best current standards. This very moderate growth of agri-

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culture, combined with an almost stationary population, enabled the country to remain relatively self-sufficing as far as its food supply was concerned. Moreover, the industry and thrift of the agricultural class in France proved one of the most important economic resources of the nation.

In manufacturing, particularly in the introduction of modern methods, the country made greater progress than during the first half of the century. The introduction of new processes made it possible to use the theretofore undeveloped iron ore. Although new coal fields were opened up, between a third and a half of the coal consumed had to be imported. Whereas the development of the iron and steel industry that resulted was at a rapid rate, the total output remained far below that of England or Germany. In the manufacture of machinery and shipbuilding the country was also relatively backward. In the textile industries, linen excepted, and particularly in the manufacture of the finer grade of products, there was marked progress, and a considerable export trade was maintained. In the manufacture of chemical products the country remained backward and not until the twentieth century was much use made of hydroelectric power. Even at the end of the period, French manufacturing industries were characterized by a relatively small scale of production, owing in certain lines at least to their preeminence in artistic finish. In 1911 almost one-third of the active population was classified as engaged in industrial activities.

The foreign commerce of France, aided by the movement to reduce tariff duties in the fifties, continued to expand until about 1880. There followed a strong reaction toward protectionism, backed by both the agricultural and the manufacturing interests; and this tendency dominated the commercial policy of the country for the rest of the period. Partly as a result of these restrictions and partly owing to the declining price level, the value of the foreign commerce remained nearly stationary for the two decades following 1880. The first decade of the twentieth century, aided by the rising price level, brought a renewed advance; so that the total value at the end of the period was about three times what it had been in 1860. After 1895 the balance of trade, theretofore generally favorable, was almost invariably unfavorable. The tonnage of the French merchant marine failed to grow, despite the fairly heavy subsidies and favoring regulations adopted about the middle of the period, until after 1900; by 1914 it had increased about 50 per cent, though nearly one-half of the total was still made up of sailing vessels.

In general the economic growth of the country though slow was fairly steady. The changes in the general character of the activities were so small that even in the twentieth century France could be regarded as being relatively self-sufficing economically—a situation not without cer-

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tain advantages in such an emergency as the first World War, but a product of developments and policies that failed to produce so rapid a growth as in England or Germany. The thrift of the people increased the accumulated capital and there was a considerable outflow to other countries, especially to eastern Europe, large sums being invested in Russian bonds. The total wealth of the country was estimated at \$62 billion, not far below that of Germany, and the national income at about \$7,300 million, a sum which, though about a quarter less than that of Germany, gave a per capita income that was greater than in Germany. However, the relative position of France among the economic world powers at the beginning of the twentieth century showed a marked decline as compared with its position in the eighteenth century.

Germany. The rapid rise of industrial Germany during the latter portion of the nineteenth century was one of the outstanding features in the economic history of Europe during that period. No other country on the Continent was making greater economic progress. Although, as previously stated, Germany until nearly the middle of the century was 100 years behind England in economic development, still changes were taking place, such as the extension of the Customs Union, the spread of railroads, and the slow introduction of factory methods which facilitated the rapid development of the following period. A great impetus was received from the organization of the German Empire in 1871 following the Franco-Prussian War. A renewed self-confidence, a new spirit of self-assertiveness, and a greater interest in material development appeared. The broader and more powerful government with its paternalistic organizing tendencies became an important factor in directing and stimulating the nation's economic development.

This remarkable development was a factor in the continued growth of the country's population which by 1914 had risen to about 67 million as compared with 37 million in 1860. This growth occurred in spite of a decline in the birth rate, which was only partially offset by the declining death rate. Emigration to other countries reached the highest point, over 200,000, in 1881; with the expansion of industry it declined rapidly until in the twentieth century it was seldom over 30,000 a year, and was exceeded by the number of immigrants, chiefly from the East and South-east. One of the most striking reflections of the course of events was the internal movement of population from rural to urban districts; for, although the absolute number of people living in rural districts showed no appreciable change, the proportion of the total population living in such districts declined from over two-thirds to two-fifths of the total.

German agriculture, in common with that of other western European countries, began to feel the competition of other nations in the seventies, for it was then that the country ceased to export and began to import

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grains both from the United States and, as the railroad system developed, from Eastern Europe. Just as in France this led to a demand for protection, which became a factor in the reaction from the tendency toward free trade that had dominated during the third quarter of the century. Beginning in 1879 under Bismarck's leadership, the tariff duties were advanced so as to afford an increasing amount of protection for both agriculture and manufacturing. As far as agriculture was concerned various motives played a part in the adoption of this new policy. The agricultural class, particularly the junker landlords of the East, wanted higher prices for their products; considerations of defense led the statesmen to want, as far as it was possible, to keep the nation self-sufficing for its food supply, and it was argued that the farming population supplied recruits for the army who were stronger physically and more amenable to army discipline than those from urban districts. The newly rising manufactures, facing the competition of older industries in other countries, sought protection for their products; and the fiscal needs of the imperial government with its rapidly growing expenditures made this source of income from indirect taxation particularly attractive.

Under the protection afforded by the tariff, German agriculture, although showing only a moderate growth in area under cultivation, was able, by the use of more scientific and intensive methods, to secure a very considerable increase in the output of the main products. Rye, oats, wheat, and barley, the chief grain crops, increased; the potato crop advanced rapidly; the beet-sugar crop showed a still greater growth and made possible a large exportation. Except for sheep, there was an increase in the number of livestock, especially swine, though more significant was the improvement in their quality. Increased use of machinery, together with the more scientific and intensive methods of cultivation adopted, raised the output per acre of the chief crops above that of most countries. By far the larger portion of the holdings were under 50 acres in extent. In 1907 out of a total of over 5,700,000 holdings nearly three-fifths were under five acres—seldom sufficient to provide a living—and less than 300,000 were more than 50 acres in extent. The last group, however, included somewhat more than half of the total acreage. The process of freeing the small cultivators from such remnants of feudal obligations as survived was fairly well completed during the early part of this period, so that much the greater portion of the land—nearly five-sixths in 1907—was cultivated by its owners, either peasants or the holders of large estates, the latter being most numerous in the North and East. The proportion of the population that obtained a living by agriculture steadily declined until it made up about 28 per cent of the total.

Despite the growth of German agriculture the output failed to keep pace with the rising demand for foodstuffs and the nation became increas-

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ingly dependent upon outside sources of supply. The extent of this dependence is difficult to measure but it has been estimated at about one-fifth of the domestic consumption at the outbreak of the first World War. The most marked deficiency was in the case of fatty foods. During the war, although Germany was able to obtain some supplies from neighboring countries, the scarcity of food became a most serious problem; in fact it is to the lack of food that one of the leading generals has attributed the decline in the morale of the people which he asserts was the main reason for the nation's final defeat. Though such an explanation is doubtless an exaggeration, this dependence obviously considerably increased the difficulties of defense. It was not without influence upon the country's prewar expansionist policies.

As previously intimated, the great expansion of manufacturing industries was the outstanding feature in the economic development of Germany during this period. The introduction of modern machine methods proceeded at an unprecedented pace and transformed the organization of the industries where such methods were practicable. The advance in the sciences and the close connection maintained between them and industry was another important stimulus in this growth. The tariff duties imposed on manufactured products were typically lower than those on agricultural products; raw materials commonly were admitted free; the duties on semifinished products were low and those on finished products were maintained at a moderate level. Based upon the development of the coal fields and the iron-ore deposits acquired in Lorraine, the important iron and steel industry forged ahead until the output of iron considerably surpassed that of Great Britain. The production of coal, if the inferior lignite be included, reached a figure not far below that of the latter. The great manufacturing industries of the Ruhr district centered around this growth. Closely connected therewith and aided by science was the chemical industry, notably the manufacture of dyestuffs, in which the country led the world. In the manufacture of electrical machinery and apparatus, marked success was achieved; shipbuilding also rose to a position of importance. With the introduction of factory methods the textile industries, linen excepted, expanded rapidly, though the main products were typically of a somewhat lower grade than in France or England. The development of combinations known as cartels, favored by the tolerant attitude of the government, was a prominent feature in the industrial history of the period. As a result of the industrialization of the country five-twelfths of the population was dependent upon mining and manufacturing by 1907.

The history of Germany's foreign commerce during these years naturally reflected the changes in her domestic economic activities. The imports of foodstuffs and raw materials for manufacturing steadily rose and

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manufactured products made up an increasing proportion of the exports, nearly two-thirds of the total by the end of the period. Among these exports the most important were machinery, iron and steel manufactures, and textile products. Among the countries to which Germany was exporting, Great Britain and Austria-Hungary were far in the lead, followed by the United States, France, and Russia. In the case of her imports Russia and the United States each supplied about twice the amount obtained from any other country; Great Britain and Austria-Hungary came next in order. Between the organization of the Empire and the outbreak of the first World War, her foreign trade quadrupled in value; at the latter date it exceeded that of any other country but the United Kingdom. The balance of trade, except for a few years in the eighties, was unfavorable and towards the end of the period fluctuated around \$300 million a year. With the expansion of her shipbuilding industry and her commerce, Germany was successful in developing her merchant marine. The net tonnage of her merchant fleet more than tripled and in the ocean-carrying trade she attained a position next to, though still far below, the United Kingdom.

The preceding account will make it evident that Germany in her economic development was following in the path that England had taken long before in the direction of specialization and an international economy that involved increasing dependence upon trade with the rest of the world; however, her greater area and resources lessened the extent of that dependence. That growing dependence, however, was in no small measure responsible for the demand for expansion—"a place in the sun"—and furnished a basis for the claim that expansion was a defensive move, since otherwise the nation's continued development, and in time of war its existence, would be threatened. In spite of the opportunities for investment at home made possible by her rapid development, the growth of accumulated capital was such that the investments in foreign countries, often closely connected with foreign trade, steadily increased until at the close of the period they were estimated at over \$7 billion. As in the case of England the income from this source together with that from shipping more than sufficed to meet the unfavorable trade balance. In the expansion of these foreign investments, as in the growth of domestic industry, the development of the great German banks played a particularly active part. By 1914 the total wealth of the country was estimated at about \$76 billion and the national income at \$10,460 million—both figures only slightly below those for the United Kingdom, though the per capita income was only about three-fifths that of the latter country.

Other Countries in Europe. Concerning the economic development of the remaining countries of Europe the briefest statements must suffice. Belgium and Holland shared in the advanced development of their neigh-

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boring countries, the former specializing in manufacturing and the latter in commerce and agriculture. Switzerland, safe in its Alpine stronghold, prospered with the growth of tourist trade and, in the more habitable portions, developed much the same activities as the adjacent countries. The union of the crowns of Austria and Hungary in 1867 gave somewhat greater unity in this country, though it still suffered from the complex racial composition of the inhabitants, the numerous conflicting interests, and a lack of willingness to make mutual sacrifices for the common good. The spread of the railroad system helped to develop greater economic unity and to promote trade with neighboring countries. Under the stimulus of a high protective tariff a considerable growth of manufacturing occurred in Austria, but Hungary remained chiefly agricultural in character. In the sixties Italy achieved political unity and became recognized as one of the six great powers of Europe, but at the cost of an armament burden that was staggering in proportion to her economic resources. The people were extremely poor and the lack of opportunities for absorbing the rapid increase in the population led to an emigration which in proportion to the number of inhabitants was the largest in Europe. The lack of varied natural resources, especially coal and iron, made agriculture the main pursuit and only latterly was there an appreciable growth of manufacturing along modern lines coupled with some effort to make use of the available water power.

Vast Russia up to about 1860 had scarcely been touched by the industrial development of western Europe. The freeing of the serfs, 1858-1863, marked the ending of this surviving stronghold of European feudalism. The construction of an adequate railroad system was recognized as the first prerequisite for the modernization of the country as well as for purposes of defense; but the resources of the government were limited, and it was only slowly that even the outlines of the main system were completed. Aided by an extremely high tariff and considerable foreign capital, some progress was made in introducing modern manufacturing methods, chiefly in Poland. But even at the close of the period by far the greater portion of the vast population—probably nearly 90 per cent—was primarily engaged in agriculture. Foodstuffs and raw materials constituted the only important exports. The trend of development in the Scandinavian countries was greatly influenced by the industrialization of their neighbors and their growing demand for foodstuffs and raw materials. Denmark became devoted to agriculture and was notably successful in dairying. In Norway and Sweden with their varied resources, mining, fishing, forestry, and shipping were also important activities. In the Iberian peninsula Spain and Portugal suffered from unstable or inefficient governments and remained relatively backward—a condition which was even more marked in the Balkan peninsula.

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Economic Developments in Other Continents. The important economic developments that took place in other continents, North America perhaps excepted, were generally very closely connected with the industrialization of western Europe. In many cases they were a product of the outflow of European people, capital, and business methods, as well as of the rising European demand for the foodstuffs and raw materials of other lands. At the same time, however, it must not be overlooked that, except for these developments in other continents, no such growth as took place in the countries of western Europe would have been possible. There was an increasing interaction between the two, a result of growing interdependence based upon greater specialization and a more nearly world-wide economy.

In the western hemisphere Canada was closely following at a later date the general lines of development of her neighbor to the south. The organization of the Dominion Government in 1867, the construction of transcontinental railroads, the opening up of the vast agricultural West, and the growth of manufacturing in the East were the outstanding features of the period. In Latin America the obstacles to progress arising from unstable governments, a sparse population, and widespread ignorance among the masses continued to be the retarding factors outside of such progressive countries as Argentina, Chile, and portions of Brazil. Only in the first two countries was anything like a fair railroad system in existence. From all these countries, aided by foreign capital and business enterprise, came a steadily increasing volume of products from the newly developed agricultural, forest, and mineral resources.

In Asia, where dwelt about half the world's population, the most important economic developments were largely a product of the growing impact of the Occident. The opening of the Suez Canal in 1869 was an appreciable factor in augmenting this influence. The transformation of Japan, following the overthrow of the Shoguns in 1868, the abolition of feudalism, and the adoption of western methods, affords perhaps the most striking example of a nation's sudden rise to power in recent decades. The area of the country was about three-quarters that of France, and most of the land was mountainous and unsuited for agriculture. Yet such was the growth of the country that a population of under 33 million in 1871 had risen to nearly 54 million by 1914, not including that in newly acquired territory. Though the extractive industries continued to occupy most of the population, marked progress was made in the introduction of manufacturing under modern methods, notably in the iron and steel and textile industries. Western nations began to feel the competition of Japanese products in Asiatic markets and of the rapidly developed merchant marine in the carrying trade. In less than half a century the nation rose from a position of relative obscurity and a medieval economic organi-

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zation to a recognized position among the economic and political world powers.

In the rest of Asia the chief economic developments were largely a product of the activities of European peoples and countries. In India, under English direction, a comprehensive railroad system was constructed. Russia completed the Trans-Siberian railroad in 1905 and extended other lines into Turkestan. European capital made a start in building the greatly needed system in China. Outside of India and a small beginning in China, Western methods of manufacturing were not used and in its economic contacts with the rest of the world the continent of Asia served mainly as a producer of raw materials and a consumer of manufactured products.

In Africa considerable progress was attained in making known its varied resources and at least a fair beginning in developing these resources. Outside of Cape Colony, however, few railroads penetrated far into the interior. The backward state of the native population prevented the development of any appreciable market for foreign manufactured goods. From the point of view of Europe, Africa remained significant chiefly as a source of raw materials and an opportunity for economic exploitation. Australia and New Zealand, developing under a purely Western civilization with a high standard of living, became contributors to the world's supply of foodstuffs and raw materials and provided a moderate market for manufactured products. The Dutch East Indies, notably Java which became one of the most densely populated regions of the world, and the Philippines, after their acquisition by the United States, also became more important sources of supply for certain raw materials.

The Growing Economic Rivalries of Nations. The foregoing summary will suffice to show why the trend of economic development tended to accentuate the economic rivalries between nations which characterized the period, revived the spirit of economic imperialism, and became an increasingly important factor in world politics and the events that culminated in the first World War. For the purpose of securing a clearer understanding of the situation and its effect upon the economic and political relations between the United States and the rest of the world, a brief summary of the most significant developments that brought about this result is desirable.

Underlying all was the tendency toward a more nearly world-wide specialization and division of labor—a product chiefly of lowered costs of transportation that followed the expansion of railroads, the opening of oceanic canals, and the introduction of steamships. The resulting economic interdependence among nations created more bonds of common interest, but also gave more frequent occasion for the appearance of conflicting interests. Moreover, the more advanced and powerful nations

were tending to specialize in the same general line—industry. Their products were often identical in general character and hence competition between them was greatly intensified. Thus England, far in the lead during the first half of the nineteenth century, saw one nation after another becoming a serious rival in one or more lines of economic activity; France, Germany, the United States, Japan, to mention the most conspicuous, became competitors in manufacturing, first in the domestic markets and then in the world markets. Moreover, greater specialization in industry led to keener competition in other fields: a struggle to secure the supplies of raw materials upon which these industries were based, a need for foodstuffs with which to feed the growing industrial population, and competition in the world's commerce in all these products. At the same time the rapidly accumulating capital of these nations, flowing out into less developed countries, resulted in a keen rivalry to secure the most promising opportunities for exploitation.

Finally, it may be pointed out that the working out of certain economic laws was of significance in bringing about these results. Diminishing returns on increasing capital investments at home combined with better facilities for investment abroad hastened the outflow of lendable funds; diminishing returns in the extractive industries, even though partly or entirely counteracted by improvements, combined with cheaper transportation, tended to increase the dependence upon foreign sources of supply for foodstuffs and raw materials; and the prevalence of decreasing costs in manufacturing hastened the process of industrialization and intensified the competition in the sale of manufactured products.

These economic developments combined with the growing spirit of nationalism (also in part a product of economic changes) led to increased emphasis upon what is called "dollar diplomacy"—that is, international negotiations governed by economic considerations—and also to the vigorous revival during this period of economic imperialism. The struggle for colonies, which had been so keen in the immediately preceding centuries, though not abandoned, as has previously been pointed out, was much less prominent during the period from 1815 to about 1880. Even in the case of England, who took the lead during these years, such expansion of the Empire as occurred was less the product of any definite policy on the part of the home government than of the activities of her merchant traders, capitalists, and those who already dwelt in her scattered dominions. The closing decades of the nineteenth century witnessed a marked change in the situation. By that time desirable regions that could be easily acquired were becoming scarce, Africa providing the most important. By that time the consequences of the rapid industrialization of other nations besides England were becoming obvious; at that time the reaction toward economic protectionism became widespread; by that time Italy and Ger-

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many had become unified, within a short period Japan was modernized, and all three joined in the general struggle.

At bottom, the ideals were substantially those of the old Mercantile System—the development of a rich, powerful, economically self-sufficing empire. Except for the emphasis which mercantilism had placed upon money and the accumulation of the precious metals, colonies were looked upon as contributing to this aim in much the same variety of ways. Thus colonies would supply the mother country with raw materials and food-stuffs; they would provide a market for manufactured products; their trade would yield a profit and help in the development of a merchant marine; they would provide opportunities for the investment of capital and a home for emigrants where they would not be lost to the empire.

Impelled by such objectives and a realization that the desirable regions were getting scarce, the movement to acquire colonies received a new impetus during the last quarter of the nineteenth century. Practically all that remained of Africa was soon divided up among the great powers; the same held true of the scattered islands of the Pacific. At the same time in many of the less powerful countries where actual annexation seemed impracticable “spheres of influence” were agreed upon as in the case of China, Persia, and Siam. In still other lands economic penetration—the investment of capital frequently combined with considerable influence upon the government in obtaining economic advantages—became an important method for furthering these ends.

On more than one occasion this economic rivalry threatened to cause war and in the complex of factors that underlay the first World War it was among the most significant. Finally, it may be noted that that war, by aggravating national rivalries and providing illustrations of the importance of economic power and self-sufficiency, has only intensified the keenness of this struggle. Only as one understands the outstanding features in the economic development of the world during the last century, can he understand many of the most prominent problems in the world of today. Moreover, only against this briefly sketched background of world development, can one fully appreciate the economic development of the United States during this period, grasp the important interaction between our development and that in the rest of the world, and comprehend the increasingly significant relations between our country and the world of today.

The United States since 1860—The Period as a Whole. Before taking up the detailed narrative of our development during these years, a brief characterization of the period as a whole is needed to furnish some background for the more detailed account and to emphasize its outstanding features. At the outset the country was plunged into a prolonged and

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devastating civil war—the product of the conflicting sectional interests and ideals that had long troubled the nation. The victory of the North settled forever the question as to the indissoluble character of the Union. Politically, the outcome was of the utmost significance for the future of the country; economically, however, its effects, though important, were less significant and far-reaching. For this reason the question may be raised whether it is properly chosen as separating two distinct periods in the country's economic development. If so, what are the characteristics that distinguish the period that followed from that which preceded?

Among the enduring economic consequences of the war the most important were the effects upon the South where, in addition to the economic devastation involved, there was the necessity of adjusting conditions to the abolition of slavery. Also, the South lost in its relative influence upon national affairs; the North, and in time the West, gained in political power; and everywhere the influence of accumulated capital became increasingly prominent. Other economic changes in the country as a whole that are directly traceable to the war are: a higher level of tariff duties, greater Federal expenditures and taxes, some changes in the circulating medium, and the acceleration of such movements as the growth of manufacturing, the introduction of a national banking system, the construction of the transcontinental railroads, and the immediate decline of the merchant marine. Whether these changes were of sufficient importance in their influence upon the general trend of economic development of the country to justify the claim that the war marks the beginning of a new period may well be questioned. After all, these changes cannot be considered as the dominating factors in shaping that development.

If it is possible to name any one factor that dominated, it was the same one that dominated the preceding period—the influence of the West—at least until about the close of the century. The country was still absorbed in the process of settling, opening up, and developing the vast areas barely touched by the hand of the white man before 1860. The railroads now became an important factor in the pioneering movement and the rapid construction of the different lines stretching from the Mississippi Valley to the Pacific coast soon provided easy access to the western half of the country. In the meantime changes in the public land laws made acquisition of these areas easier and easier. The West was still the land of opportunity. Until 1890 at least, the westward surge of population proceeded with unabated force, and a steadily growing volume of immigrants poured in from Europe. The newly opened lands and the improved transportation facilities aided the continued rapid expansion of agriculture, and the surplus products found a market in the industrialized nations of Europe. The expansion in the West was also a major factor in the recurrent panics and thus helped to shape much of the monetary history of the

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period. Until after the first World War farming continued to occupy the attention of the largest single group of the population.

The factor of second importance in our economic development during this period was the growth of modern capitalistic industry, most prominent in the great expansion of manufacturing. Favored by the continued development of the country's rich and varied natural resources and stimulated by the introduction of new machinery and the rapidly expanding domestic market, manufacturing grew by leaps and bounds. Before the end of the century manufacturing industries were making a larger net contribution to the national income than agriculture. Imports of manufactured products dwindled to only a small percentage of the domestic output and exports were entering the world markets so that in this field the country could be considered almost self-sufficing. But the spread of modern capitalistic industry created new problems that assumed a steadily increasing prominence in the economic and political life of the nation. These involved the relation between labor and capital, the regulation of railroads and public utilities, the control of combinations and trusts, and the business cycle. These problems loomed larger and more formidable with every passing decade till, with the advent of the twentieth century, they may be said to have become the dominant issues. By that time the development of the West had ceased to be the most important factor in shaping the course of events in the economic life of the nation. A new epoch had begun.

This result was due to the fact that the supply of free fertile public land was practically exhausted. The preliminary work of settling the fertile land and opening up the resources had come to an end, as far as it can be said that there is ever any end to this process. The frontier had disappeared. Thenceforth the supply of undeveloped fertile land, which from the foundation of the colonies had been the most important single factor in shaping the economic development of the nation, rapidly dwindled in its influence. How fundamental and widespread in its effects upon the economic life of the nation this was destined to be will appear in the more detailed history that follows. Here it must suffice to assert that these reactions were so fundamental that the last decade of the nineteenth century marks the ending of one great epoch in our economic history and that the advent of the twentieth century begins a new epoch where new conditions dominate and where problems of a new character come to the forefront.

If the foregoing brief analysis is accepted as correct, we can now attempt to indicate more accurately the position which the years since 1860 hold in relation to the general periods in the economic history of the country. The years from 1816, when the period of transition ended, to the close of the century—if we had to name a specific year, 1896 might be

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chosen—are properly to be considered as one great epoch during which the settlement and opening up of the West was the dominant factor in shaping the economic development of the country. The Civil War is an episode of this epoch; but it does not mark any distinct change in the general trend of development or in the conditions dominating that development. It did bring certain changes of a minor character already noted.

The most important difference between the portion of the epoch that preceded the Civil War and that which followed is found in the fact that during the former the influence of the West was relatively greater while in the latter that influence, though still dominant, was on the decline. The influence of the changes and problems incident to the spread of modern capitalistic industry—much less significant in the ante-bellum years—was assuming a rapidly increasing importance. Thus from the economic point of view the ante-bellum and post-bellum years may be regarded as two periods of one great epoch, varying somewhat in character, partly because of changes owing to the war and partly because of slower changes inherent in the evolution of industrial society. In their most fundamental characteristics they were substantially similar.¹

It is important to emphasize this point since the method of treatment followed in this book has divided the epoch into these two periods and thus undoubtedly tends to create the impression that the Civil War marks a greater change than it does in fact. The justification for making such a division will be found, it is hoped, in the advantages it offers in exposition. To cover the whole epoch topically and still not lose sight of

¹ There is much that might be said in favor of choosing a date around 1850 rather than the Civil War for the dividing point between the two periods that make up the economic epoch that extended from 1816 to the close of the century. The chief argument in favor of such a choice is to be found in the developments that occurred in the railroad system of the country commencing in the decade of the fifties and the resulting reaction on the whole country's economic organization. After all it was not until after about 1850 that the really revolutionary effects of the introduction of railroad transportation upon the economic organization of the whole nation became very marked. These became marked when through lines connecting the Atlantic seaboard and the Mississippi were provided in the decade of the fifties. The most widespread reactions continued to be felt up to about 1885, during which time the transcontinentals were extended to the Pacific coast, great systems were formed, and the most rapid reduction in railroad rates ever experienced took place. Another, though less important, reason for choosing 1850 is to be found in the distinctly more rapid pace in the growth of manufacturing and the introduction of factory methods, which appears in the decade of the fifties. Although these changes had become appreciable just before 1860 they became even more marked thereafter. If, then, we add to their continued influence the other more abrupt changes in various phases of our economic life that had their origin in the Civil War, the year 1860 seems a more definite as well as a more significant date to choose for this dividing line. Admittedly, most fundamental economic changes do not take place suddenly and any attempt to set off sharply distinct periods is bound to be somewhat arbitrary in character.

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the vital interaction between events in the numerous fields of economic activity is impossible without endless repetition.

The twentieth century, it has been stated, marks the beginning of a new epoch in our economic history and it would, therefore, appear logical to end the topical treatment in the chapters that follow with the close of the nineteenth century. It will be found, however, that this is not done; instead, the narrative account is carried down at least to the outbreak of the first World War and generally down to date. Here also the justification will have to be found in the advantages of exposition. The time that has elapsed since the beginning of the new epoch is so brief that it is not advisable to devote special chapters to the topics chosen for separate treatment. Furthermore, the outbreak of the first World War so dominated the course of events during a portion of these years as to make necessary a separate account of certain phases of our economic life primarily affected thereby.

Although the chronological division of the topical treatment does not emphasize the fact that the twentieth century marks the beginning of a new epoch in our economic history, an effort will be made to point out in the chapters dealing with the various topics the significance of the changes that characterize the advent of this new epoch. Here it must suffice to note that in the twentieth century manufacturing came to surpass agriculture in the number of persons engaged in the pursuit as well as in the value of the output; the urban population by 1920 exceeded the rural population; the nation once devoted to farming was becoming industrialized. This shift reacted upon foreign commerce, which underwent a marked change in character and brought the nation into keener competition and closer contacts with the rest of the world. Capital began to flow out to other lands; the country became a creditor nation; and indications of economic imperialism began to appear. Among the more advanced nations it retained an unusual degree of self-sufficiency, but its increasing share in the economic life of the world was making a policy of isolation less and less tenable; inevitably world problems beset it. In the amount of its wealth and material income, no country could compare with it; by 1914 its national income came to exceed that of the United Kingdom, Germany, France, Austria-Hungary, and Italy combined; its per capita income was well above that of any other land. In economic power it had become the leading nation of the world.

We now turn to the more detailed study of how all this came to pass.

CHAPTER XXVIII

THE PERIOD OF THE CIVIL WAR

Introduction. The Civil War marks another period in the country's economic history when the immediate course of events was completely dominated by the abnormal conditions arising out of war. Consequently, a satisfactory and coherent account of these events can be given only in a separate chapter devoted exclusively to the war years. From the economic point of view the events of these years will be of interest as illustrating the economic problems of war and also as showing the way in which conditions arising out of war may have relatively enduring effects upon the subsequent economic development of a nation. Although the reactions of the war upon our later economic history were not so fundamental and wide-sweeping that they can be said to mark the beginning of a new epoch in the country's economic development, they were still of such importance that later events in many phases of our economic life cannot be understood without a knowledge of the Civil War period.

Fundamentally the war had its origin in the conflicting attitude of different sections of the country toward the institution of slavery which the dominant element in the South deemed essential for its economic progress and the existence of which it felt was threatened. This issue brought to the front the political principle of states' rights and the question as to the real character of the Union that had been formed when the Constitution was adopted. The conditions of Southern life, the economic interests of the South, and its political relations to the rest of the country had from an early date led that section, in the desire to protect its economic interests, to adopt the states' rights point of view so that when the break came many Southerners, whatever their interest in, or attitude toward, slavery, felt that this political principle was the main issue involved and took their stand with the Confederacy accordingly. This attitude was accentuated by the position taken by most of the people in the North. Many of those most strongly opposed to slavery were quite willing to let the South secede. The attitude of the great majority was that, although some compromise might be possible on the question of slavery, there could be none on the question of secession; the Union was inviolable and must be preserved. It was primarily for this ideal that the North fought.

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The issue as to the real character of the Union was not a new one. When the Constitution was drawn up it had not been frankly and squarely faced for fear that the conflicting interests and provincial spirit would prevent the adoption of the new frame of government. It therefore survived to raise its head at various subsequent times, and in each instance the occasion had been an economic interest of some section which appeared to be threatened by action of the Federal government. The Western settlements had intrigued with Spain when they felt that Congress was neglecting to protect their commercial outlet down the Mississippi; New England murmured of secession when its commerce suffered during the War of 1812; South Carolina nullified the Tariff Act of 1832 which it considered injurious to its economic interests; finally slavery brought the issue to a head to be decided by the arbitrament of war.

How fortunate it was during the early period of the new nation's existence, when the ties that bound the different sections together were so weak, that no more serious conflicts of interests arose and that such spirit of common interest and mutual sacrifice as existed was able to overcome these differences, will never be fully appreciated. Such a spirit is one of the most important elements in a nation's progress and the United States has been fortunate in that, despite the obstacles of its vast area and divergent sectional interests, economic, political, and social conditions have been more favorable to the development of such a spirit than in many of the older nations of Europe. However, it was not sufficiently strong to overcome the differences that existed over the question of slavery, and in the long run this cost the country dearly, both in treasure and in blood. The foresighted might have seen that slavery was doomed. Economically it was certain to become less and less profitable; the steadily rising spirit of democracy condemned it morally. It would have been far cheaper for the nation to buy the slaves and free them; but compromise proved impossible in the heat of aroused emotions and the issue was left to a decision by force of arms.

The Resources of the North and the South. The population of the states that joined the Confederacy was about 9,000,000 including over 3,500,000 slaves; the states that remained in the Union had a population of 22,000,000. The most serious gap in the economic resources of the Confederacy was the lack of manufacturing enterprises, the value of manufactured products in those states being less than one-tenth of the country's total in 1860. Of the total value of real and personal property in the country, estimated at over \$16 billion, the Confederacy had about one-third, though this included an allowance of \$2 billion for their slaves; its share of the annual production of wealth was doubtless smaller. Of the improved farm land the Confederacy had about one-third, a similar proportion of the railroad mileage, and about one-quarter of the capital of incorporated

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banks, but it ~~owned practically no shipping and no navy~~. The Confederacy was also under the necessity of organizing a new frame of government upon which to build. Since the Federal Constitution served as a model which, except for modifications chiefly to meet states' rights ideals, was closely followed, that problem was met with comparative ease.

The outstanding features in the economic organization of the South, in their reaction upon the ability of that section to carry on war, were the relatively high degree of specialization centering around agriculture, especially cotton, and the resulting dependence upon economic intercourse with the rest of the world. Judged simply on the basis of quantity, the economic resources of the Confederacy were decidedly inferior to those of the Union. The full utilization, under the existing economic organization, of even this limited quantity necessitated the chance to trade with other countries; obviously, if such trade were cut off so that the Confederacy was economically isolated and thrown back entirely upon its own limited and specialized resources, it would prove a most serious, if not fatal, handicap.

The Confederacy's hope of success, as far as it depended upon economic resources, was based chiefly upon the world's need for the product upon which it had specialized—cotton. Since the beginning of the century cotton had become practically a necessity of the world; in England the cotton manufacture and trade formed one of the most important branches of economic activity. It was estimated that, in 1860, 4 million people in that country were directly or indirectly dependent upon it. In the preceding decade four-fifths of the cotton used in Great Britain and three-fourths of that used on the Continent had been supplied by the South. The suffering of cotton mill operatives and the economic losses consequent upon the cutting off of the supply of cotton, it was believed, would lead Great Britain to recognize the Confederacy and then extend to it the material assistance that was needed. Although other motives might play a part, such as English opposition to the protective tariff favored by the North and the natural willingness of one nation to see another which had been rapidly rising in power split in twain, still, it was the South's control over the world's cotton supply that was expected to be the dominating factor in the situation.

The great hope and faith of the South in cotton is well typified by the words of a southern senator, speaking in 1858, who said,

Without firing a gun, without drawing a sword, should they make war upon us we could bring the whole world to our feet. What would happen if no cotton was furnished for three years? I will not stop to depict what everyone can imagine but this is certain; England would topple headlong and carry the whole civilized world with her. No, you dare not make war upon cotton. No power on earth dares to make war on it—cotton is king.

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Yet as events turned out the power of King Cotton, strong as it was, proved unavailing.

Economic Problems of the Confederacy; Securing the Supplies for Carrying on War. It has previously been pointed out that there are three outstanding economic problems that a country faces in time of war: (1) securing the goods and services necessary for carrying on the war; (2) financing the war; (3) providing, as far as possible, for the economic needs of the civilian population. These problems as they arose in the Confederacy will be taken up in order.

The problem of securing adequate goods and services for carrying on the war was the most difficult one that the Confederacy faced and soon proved really insuperable. The undeveloped state of manufacturing in the South was the first obstacle; the growing effectiveness of the blockade in cutting off trade with foreign countries was the second; and the failure to secure recognition and intervention by other countries destroyed the final hope of securing assistance from outside.

In France, Napoleon III was prepared to recognize the Confederacy but was unwilling to act without England. In England, the upper and most of the middle class favored the South for various reasons; but a small group of liberals and a considerable group, chiefly nonconformist and strongly opposed to slavery, sided with the North. In spite of the severe suffering among the cotton mill operatives they appear to have sympathized generally with the North. Great Britain's imports of American cotton had been over 2,580,000 bales in 1860 and in 1861 1,841,000 bales, but the next year the imports were only 72,000 bales. Thereafter they increased slightly; but in 1864 the amount was under 200,000 bales. The supply on hand was unusually large and strenuous efforts were made to obtain additional supplies from other countries so that by 1864 the imports from all sources nearly equaled the imports customary before 1859, though the Liverpool price for that year was over 50 cents a pound.

It happened, however, that just at the time that the cotton shortage was greatest Great Britain found herself in dire need of northern grain owing to the serious wheat-crop shortages of 1860-1862. Just before 1860 the country had been importing about one quarter of its consumption of wheat; during these years of poor crops the North, favored by large crops, was the only country in a position to make up the shortage, with the result that over two-fifths of the British imports during 1861-1863 were obtained from the North. The probable loss of this food supply had to be weighed in the balance against the possible increase in the supply of cotton that might follow a recognition of the Confederacy. King Cotton found an unexpected rival. Although these were important factors, political considerations and the moral issue of slavery, made clearer by

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Lincoln's Emancipation Proclamation, were probably more influential in determining England's decision not to act. This became evident by the summer of 1863. From then on the Confederacy's hope of any appreciable aid from abroad steadily waned.

The blockade, however, was not so complete as to cut off all foreign sources of supplies. The inlets along the southern coast afforded excellent opportunities for the blockade-runners operating from near-by ports, such as Nassau, Havana, or even Bermuda and, although the chances of success steadily diminished, their activities continued till war ended. Until the fall of Vicksburg gave the North full control of the Mississippi and cut off the western portion of the Confederacy, some supplies were obtained by way of Mexico. By this means the Confederacy secured a few of the most urgently needed things such as small arms, munitions of war, salt, blankets, army cloth, shoes, tea, coffee, and medical supplies. In return the blockade-runners carried out cotton and some tobacco and turpentine to be sold in payment for the imports. The government, the states, and private individuals all took part in this trade. In addition, ships secretly purchased and fitted out abroad were made available for preying upon the merchant shipping of the North. There was also considerable trade between the lines in the goods each section most needed. As it was seldom that these outside sources of supply provided anything even approaching what the South needed, it remained for that section to do the best it could with its own resources.

The only manufactures over which the Confederate government sought control were those supplying army needs such as arms, ordnance, munitions, clothing, blankets, tents, shoes, wagons, and harness. In some cases it established its own shops and in others made contracts with private concerns for supplies. Through its power to conscript employees for the army and its control over transportation and in some instances over raw materials, the government was in a position to compel private concerns to enter into these contracts at reasonable prices. Wool, iron, salt, and saltpeter were raw materials that were particularly scarce, and especial efforts were made to increase the supply—in the case of wool, at least, with little success. Another difficulty arose from the lack of machinery and the slight facilities for making machinery in the South, to say nothing of the scarcity of skilled labor for running it or of labor in general.

The drain upon the man power of the Confederacy to increase and maintain the army was the greatest in the country's history. Conscription of all male whites from 18 to 35 years of age available for service began in April, 1862; the upper age limit was extended to 45 years in a few months; in 1864, the limits were extended to include those from 17 to 50 years of age. Provision was made for exempting those whose services

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were more needed elsewhere, but the number exempt was probably reduced to less than 100,000. Near the end plans were made to enlist the slaves. The total number of men in the Confederate army is unknown but the most careful estimate is that the army secured the equivalent of three years service from over 1,080,000 men. What this meant for the Confederacy in drain upon man power and productive capacity can only be appreciated when it is realized that the total of all white males who came within the final limits of military age was probably under 1,150,000; in short "substantially the entire military population of the Confederate states not exempted by law were enrolled in the army."

In addition to the problem of producing the needed army supplies, there was the problem of distributing them to the army at the time and place needed, a task which, together with the movement of troops, was chiefly dependent upon the efficiency of the railroad service. But the railroads proved totally unprepared to perform this service. In the first place, most of them had been constructed for the purpose of carrying goods between the interior and the coast; they formed a system of lines radiating from the main water routes into the interior with very few through lines connecting the different parts of the South. The water routes for which the railroads were feeders were closed by the blockade. Also most of the lines were financially weak, poorly constructed, inadequately equipped, and short. Not infrequently they lacked physical connection and, even when this existed, they had difficulty in working in unity.

In the second place, practically all of the equipment of the railroads had been supplied from the North and, as it deteriorated or was destroyed, the South was totally unable to replace it. Breakdowns, wrecks, and congestion caused constant delays. By the middle of 1863 few railroads could run more than two trains a day; on the main lines it was only at intervals that anything but government freight could be transported. The action taken by the government was totally inadequate to meet the needs of the situation; yet slight as it was it was constantly opposed and hampered by the railroads and by state or local authorities. For the most part it was confined to securing priority in the movement of troops and army supplies and the construction, financed by a government loan, of two or three urgently needed connecting lines.

Another phase of the problem of securing goods and services was that of the general direction, control, mobilization, and conservation of the available resources—the task of the government. Numerous difficulties stood in the way of efficient performance of this task. The fact that the central government was new and had to perfect its organization was one; the difficulty in finding men of sufficient ability was another. Far more serious was the problem of securing the necessary cooperation and unity

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of action, not only among different branches of the central government but also between the central government and the various states. The latter proved a particularly serious element of weakness. The problem called for the highest degree of centralization of control and this of course ran contrary to the spirit of individualism and the doctrine of states' rights typical of the South and the very basis of secession. Throughout the war the Confederate government faced this dilemma between the obvious need of the situation and the fear of infringing upon states' rights. In innumerable instances, notably in North Carolina and Georgia, the states and their governors hampered the central government in its efforts to secure greater efficiency. Finally, the methods of financing the war employed by the government, as will be explained later, were such as to increase the scarcity of supplies and the difficulty in obtaining them.

Under such conditions it is obvious that the task which confronted the government was a most difficult one, and it is not surprising that the results fell far short of the needs. As far as small arms, ordnance, and ammunition were concerned, the army was fairly well supplied, either by imports or home production, though in the latter years the ordnance was inferior to that of the North. The supply of woolen clothing and blankets, after the first year or two, was most inadequate and the same was true of shoes, medical supplies, and instruments. In the South as a whole the supply of food was adequate, if we except a few imported products such as coffee, tea, and salt; the chief difficulty consisted in getting these supplies to the army at the time and place needed. Lee's army in Virginia during the last of the struggle suffered most from this difficulty, though Sherman's troops marching through Georgia found supplies plentiful. Throughout the war the inadequacy and increasing insufficiency of the railroad system hampered the movement of both troops and supplies. Thus not only the lack of certain resources but the failure to make the best of those available, owing to inadequate organization, proved very serious obstacles to success.

Financing the War in the Confederacy. The limited financial resources of the Confederacy and the heavy cost of the war naturally made the problem of finance a most difficult one at best. Yet, admitting the difficulty, we must say that the methods actually adopted were extremely shortsighted and for the most part tended to increase, rather than to minimize, the obstacles in the way of a successful outcome. The methods followed in many respects resembled and showed little advance over those of the Revolution, though the existing conditions ought to have made the mobilization of financial resources much easier.

The outstanding defects, as usual, were the unwillingness to resort to effective taxation and, in consequence, the general reliance upon borrowing and the issue of paper money. Among the indirect taxes levied

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the export duty on cotton yielded practically nothing and the tariff duties yielded barely \$1 million, specie value, during the course of the war. In August, 1861, a direct tax of $\frac{1}{2}$ per cent on most forms of property was enacted; but it yielded only \$18 million, and less than a tenth of this was secured by taxation, since the individual states were allowed to assume their quota which most of them raised by borrowing. Up to the end of 1862 less than 4 per cent of the government's receipts came from taxes. It was not until April, 1863, when the war was half over, that even an attempt at fairly heavy taxation was made. At that time taxes were levied on various products, on money and deposits, on certain wholesaling profits, on income, on various occupations, trades, and lines of business, and a tithe on agricultural products. Up to October, 1864, a little over \$100 million in currency had been received under this act, but the specie value was probably only \$5 million.

There was great opposition to the tax of one-tenth on agricultural products which, being payable in kind instead of in the depreciated currency, fell heavily on the farming class. Fear of the tax and the inefficient methods of collection led to concealment or decreased production of crops and consequently increased the scarcity of those products, and no small portion of the amount collected was wasted because of inadequate provision for its storage and distribution. During the last year of the war many of these taxes were increased and new ones imposed. Although the nominal rates were frequently very high, the proceeds amounted to a very small portion of the funds required to meet the government's needs. This was so because nearly all the taxes were payable in the rapidly depreciating currency, frequent concessions or modifications were allowed, and the machinery for collection was far from effective.

In default of any appreciable revenue from taxation the government fell back upon the policy of financing the war chiefly by borrowing and the issue of notes, mainly the latter. After the first sale of \$15 million of bonds, which it may be noted provided over one-half of all the actual specie receipts secured by the Confederacy, the government found the greatest difficulty in disposing of later issues, owing to the lack of available capital and the complete financial disorganization of the South when it was cut off from trade with the rest of the world. One method of meeting the difficulty was to offer bonds in exchange for the staple agricultural products, chiefly cotton, a device also designed in part to relieve the financial difficulties of the planters.

In this way some supplies were obtained for the army, but the most important item in those receipts, about 430,000 bales of cotton, was of little immediate use because of the difficulty in getting it out of the country; only about 20,000 bales were exported. This cotton was used as security for the only loan floated abroad, a loan for \$15 million sold in

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1863, which, however, netted less than half that sum. From 1862, the growing distrust in the future of the government greatly increased the difficulty in disposing of bonds and was reflected in the marked preference for its notes rather than its bonds, not because the notes were considered sounder but because they could be more easily and quickly disposed of.

The failure to sell more bonds simply resulted in larger note issues. When the effects of the resulting depreciation of these note issues became serious, the government's chief device for relieving the situation was a resort to measures, first, to induce and, later, to compel people to exchange the paper notes for bonds. An act passed in October, 1862, and then the Funding Act of March, 1863, were designed to secure such an exchange and some \$126 million of the notes were thus funded. The relief was slight and very brief, for new issues of notes were put out faster than the old issues were retired. In February, 1864, more drastic action was taken in a law which practically compelled the holders of most note issues either to exchange them for bonds or for new notes at two-thirds of par or else to pay taxes designed to drive the notes out of existence. Though possibly \$300 million of notes were funded, new issues soon raised the amount of outstanding notes to still higher figures. It was for this purpose that most of the bonds disposed of by the government during the last half of the war were put out, the receipts from the voluntary purchase of bonds being relatively insignificant.

The last full statement of the condition of Confederate finances, made for October, 1864, well reflects the general failure of the government to sell its bonds. Out of a total debt of \$1,371 million only \$362 million was represented by bonds; the rest consisted of different note issues. Furthermore, as two-thirds of these bonds were put out for the refunding of notes, only about \$125 million represented voluntary domestic purchases of bonds. Though the government paid its interest fairly regularly, after the first year it paid in the depreciated notes. The fact that before the end of 1863 the Confederate 8 per cent bonds were selling at the rate of about 10 cents in gold on the dollar suggests the condition of the government's credit and the difficulty it faced in borrowing. The following year the rate was less than half of this. In 1865, in the utter hopelessness of its credit, the government called upon the people for gifts.

The failure to secure any appreciable revenue from either taxation or bond sales resulted in the government's relying almost entirely upon the issue of its notes to meet its expenditures—virtually a forced loan. The notes or certificates put out took various forms; some bore interest, but much the greater portion did not and served simply as paper money. Though never made legal tender, they were generally accepted. The changes in the amount in circulation can only be approximated: Prof. Schwab estimated the amount at over \$30 million at the close of 1861 and

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\$450 million a year later. In spite of the refunding in 1863 the total had risen to over \$700 million in the fall of that year. Though still more were refunded in the following year, the amount outstanding before the end must have been well over \$1 billion.

The premium on gold in terms of this currency fluctuated with the amount outstanding and the prospect of Confederate success. It reached 50 per cent in April, 1862; 300 per cent in January, 1863; and 2,300 per cent in February, 1864, after which there was a slight decline followed by a rise to 6,100 per cent in March, 1865, just before the final collapse. The currency prices of commodities rose with the premium on gold but they went to a higher level. The price of any given commodity was of course also affected by the conditions of demand and supply. Thus the great staples, cotton and tobacco, did not rise so much as the gold premium and imported commodities, such as coffee, rose very much more. Meats and cereals sold at a level which, reduced to a gold basis, was not ordinarily much above the prewar level, though there were marked variations among different sections. This method of financing the war so largely by note issues only aggravated the difficulties that beset the government; it enormously increased the cost of the war, resulted in gross inequalities in the distribution of the burden involved, and accentuated the disorganization in the economic life of the South. As one writer says, even admitting the great difficulties of the situation, it is hard to see how a worse policy than that chosen was possible.

In the case of the individual states the financial policy appears to have been very similar, though adequate information on the subject is not available. At the beginning of the war many states, in order to lessen the hardships of the people, postponed the collection of even the normal state taxes. Though frequently the rates were raised or new taxes were imposed, the increased levies did not keep pace with the depreciation of the currency in which they were paid so that in terms of gold the receipts were often less than before the war. Though the result was a heavy reliance upon the issue of bonds and notes, the use of the former was seriously limited by the difficulty in disposing of them. The notes simply augmented the mass of depreciated paper money. The people of the South in general seemed to show no appreciation of the fact that a country that finances its own war cannot as a whole escape or postpone the burden involved by refusing to levy taxes. The North also was by no means free from this delusion. Such action simply alters the incidence of the burden among different classes and increases the difficulties in obtaining the goods and services required for the effective prosecution of the war.

The Reaction upon the General Economic Life of the Confederacy. The marked specialization in the economic activities of the South, with the resulting great dependence upon trade with the rest of the world, naturally

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accentuated the disorganization in the economic life of that section when practically all that trade was cut off. The loss of the market for its staples undermined the center of the foundation upon which most of the trade and the financial institutions of the South had been built up. When cotton and tobacco could no longer be exported and the hope of foreign intervention failed, the resources devoted to their production represented losses rather than a gain. Such resources, therefore, had to be shifted as far as possible to the production of other things for which there was urgent need. Active measures were taken by both governmental authority and individuals to secure a reduction of those crops and increase the output of foodstuffs; but planters were slow to make the change. It is estimated, however, that the cotton crop of 1863 was less than a million bales and in each of the two following years not over half a million. Whereas the crop of 1860 had been $4\frac{1}{2}$ million bales, this was much the largest on record at the time. The mistaken policy of the government in impressing foodstuffs at prices fixed below the market value only tended to check such a shift and, in addition, slave labor was not of the type easily diverted to other crops. It should be noted, however, that throughout the war the slaves generally continued peacefully at their work and with only a minimum of supervision.

The cutting off of trade also created the problem of securing supplies previously imported to meet the general needs of the civilian population. Besides the lack of manufactured goods there was a marked scarcity of such commodities as iron, coal, paper, salt, coffee, tea, sugar, drugs, soap, and candles. In part these needs were met by the blockade-runners or trade across the lines, and in some cases by the development of local manufactures. The more urgent needs of the army resulted in employing most manufacturing facilities on such supplies. Thus in the case of many commodities the population was forced to go without or try to make the supplies on hand last as long as possible. Food necessities were fairly abundant except where the armies were operating.

The ceaseless outpouring of paper money had its seriously disturbing effects upon the civilian population as well as upon the activities of the government. A new element of risk was injected into all financial transactions that further disorganized business. Speculation was encouraged and the scarcity of goods increased. The outcry against the profiteer was general and there were innumerable efforts to check speculation and regulate prices, but they met with little success. Wages rose more slowly than prices and salaries still more slowly, thus putting an unequal burden on classes dependent upon such sources of income. Many deserted from the army to save their families from destitution since their army pay, first fixed at \$11 a month for privates and increased to only \$18 a month in 1864, became almost worthless. Creditors and those dependent upon fixed income found their assets and income reduced to next to nothing. The

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well-known story of the individual who said that at the beginning of the war he went to market with his money in his pocket and brought home his purchases in a basket but at the end he carried his money to market in his basket and returned with his purchases in his pocket, suggests a situation that proved only too tragic for many a Southern household.

On no occasion in our history has war caused such a disorganization and change in the normal economic life or entailed such burdens and sacrifices as did the Civil War in the South. Handicapped at the start by the very character of its economic organization and limited resources, further handicapped by mistaken methods of finance and a failure adequately to mobilize even the resources available, facing the necessity of drawing practically all the white males of military age into the army, the Confederacy held out surprisingly long, even though it had the tactical advantages of fighting on the defensive and from within a circle. When the struggle ended the South was left prostrate; fortunes had been swept away, much of the capital accumulated in the past had been used up or destroyed, and the ranks of Southern manhood had been decimated. The labors of a generation were required for recovery.

The North during the War. The Problem of Supplies. The material resources of the North combined with the considerable development of manufacturing and free access to the markets of the world made the problem of securing supplies much less difficult than in the South. With such resources available the main problem was to secure efficient mobilization, coordination, and direction of the economic activities necessary to produce and distribute the required supplies. Quickness in such action would have been of great advantage and might have considerably shortened the struggle, but the North was extremely slow in awakening to an appreciation of the size of the task that confronted it and lost such advantage as it might otherwise have obtained. The delay in getting a large army into the field allowed time to make the shifts in production necessary to secure supplies.

The North had no such difficulty as the South did in providing the necessary capital; and, though the drain of men into the army created some difficulty in securing adequate labor supply, it was nothing like that which faced the South. A fair supply of skilled labor was available and marked progress was made in introducing labor-saving machinery. With few exceptions the government was content to rely upon private contracts for securing its supplies though, as is frequently the case under such conditions, inadequate supervision led to many instances of fraud and corruption. The government did establish factories to make clothing, medical supplies, and bakery products, as well as packing plants and additional arsenals and navy yards; but it exercised no such extensive control over supplies and production as did the Confederacy. Thanks to the rapid

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construction during the preceding decade, the railroads of the North were fairly well prepared to meet the demand made upon their services and the problem of transporting troops and supplies appears to have been met with a marked degree of efficiency. Though the government was authorized to take over the railroad and the telegraph systems in 1862, its general policy was to guide rather than to assume actual operations, except in the zone of warfare. Among the highest government officials Secretary of the Navy Welles was conspicuous for his successful building up of the navy and the administration of its affairs. The first Secretary of War proved incompetent but, after he was replaced by Stanton in 1862, this department was also admirably managed.

The results obtained in securing supplies under these conditions were in marked contrast to those in the South. The number of men enrolled in the army rose to over 900,000 by January, 1863, and at the close was over 1,000,000. The total number of enlistments, including reenlistments, was nearly 2,900,000 but the average length of service was shorter than that of the Confederate soldiers. It has been estimated that, allowing for this difference in terms of service, the Union army averaged about 50 per cent more men than the army of the Confederacy. Though the quantity of army supplies required by the North was thus considerably larger, the resources for securing them were still larger and better and the problem was consequently much simpler. The results can best be summarized by Rhodes' conclusion that "a mass of evidence warrants the statement that never had an army been so well supplied with food and clothing as was that of the North; never before were the comfort and welfare of the men so well looked after."

The Financing of the War by the North. In its methods of financing the war the North at the start did little better than the South, making slight provision for taxation and relying mainly upon borrowing and note issues. But, as time passed and the seriousness of the struggle and the size of the financing involved became better appreciated, a sounder and more vigorous policy was adopted. The results, however, were not appreciable until the struggle was approaching its end. As late as 1864 Secretary Chase felt by no means certain that the financial resources of the North would hold out until victory was attained.

The treasury had been faced with a deficit just preceding the outbreak of the war and in order to secure more revenue an increase in tariff duties was proposed. Although the resulting legislation, the Morrill Tariff, was not passed until March, 1861, it was essentially a peacetime measure and reflected no attempt to prepare for the obvious fiscal needs of the emergency. The immediate needs of the government were therefore met by borrowing. When Congress met in special session in July, Secretary of the Treasury Chase estimated that about \$320 million would be required dur-

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ing the next fiscal year, and he proposed to meet the extraordinary expenses by borrowing and to raise about \$80 million by taxation to cover ordinary expenses and the interest and sinking fund requirements on the debt. In August Congress increased the customs duties on a small group of commodities and in December further increased the duties on sugar, tea, and coffee. At the same time provision was made for a direct tax of \$20 million and an income tax at the rate of 3 per cent on incomes in excess of \$800 a year; these taxes did not become effective early enough to produce any revenue the first year. A loan of \$250 million was authorized in the form of bonds or notes and of the sum \$50 million was allowed to take the form of noninterest-bearing demand notes of small denominations, though not under \$5. The banks of the country agreed to subscribe in three installments for \$150 million, three-year notes bearing 7.3 per cent interest. Secretary Chase insisted that under the law payment to the government must be in specie and, most unfortunately, refused to allow the proceeds to remain on deposit in the banks to be drawn against as the government needed. This resulted in an unnecessary strain on the banks and the money market; in December, 1861, the banks generally suspended specie payment followed by the government.

By that time it was evident that, since the expenses would be much greater than had been estimated and the receipts less, more money was needed at once. Early in 1862 Congress provided for further borrowing by authorizing an issue of \$500 million 6 per cent bonds together with the issue of \$150 million legal tender notes, including the previously authorized demand notes, which were made convertible into the bonds. Very few of the bonds could be sold at the time, partly because of Secretary Chase's apparently unjustifiable interpretation that they could not be sold below par. Consequently the government fell back upon short-term notes or certificates of deposit and the issue of legal tender notes, which came to be known as "greenbacks." Meanwhile Congress was considering new taxes for, although Chase had only suggested a slight increase, the country was demanding them and they were urgently needed to sustain the government's credit. The fact that during the fiscal year ending June 30, 1862, barely \$50 million had been received from taxes, practically all from customs duties, though the net borrowing was nearly nine times as great, showed how little reliance had been placed upon taxation.

By July, 1862, the more vigorous policy of taxation which Congress favored took the form of legislation, and from then on to the end of the war there was steady improvement. One law imposed internal revenue taxes of moderate rates on a great variety of objects and increased the income tax rates. Partly to offset these taxes the customs duties were generally advanced in a new tariff act which raised the general level of rates on dutiable commodities to 37 per cent. Though the following fiscal year

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showed a yield of over \$100 million from taxation (nearly two-thirds of it from customs duties), as against net borrowing of $5\frac{1}{2}$ times that sum, the results were disappointing and further increases were necessary.

The process of framing new legislation was a slow one and it was not until the middle of 1864 that considerable increases were enacted. The internal revenue act of that year not only imposed much heavier rates but taxed many more things than the previous law. It has been said that "nothing was omitted, from the raw product to the finished commodity. Often an article received a half-dozen additions ere it reached the consumer." Partly to offset these domestic taxes, partly to provide more protection, and partly to secure more revenue, another sweeping advance in

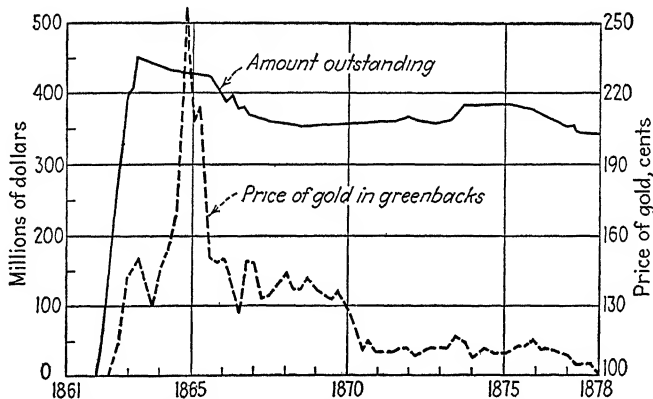


FIG. 31.—Price of gold dollar in greenbacks, quarterly, and amount of greenbacks outstanding, 1861–1878.

customs duties was made, raising the average rate on dutiable commodities to 47 per cent, or more than twice that which had prevailed in 1860. Finally, in 1865, the income tax rates were raised once more: incomes between \$600 and \$5,000 were taxed 5 per cent and those above at double that rate. Though the income tax ultimately yielded a total of nearly \$350 million, barely \$50 million of it was received before the war was over. As a result of the heavier taxes the government receipts from this source mounted rapidly. For the fiscal year 1864 over \$212 million was thus obtained, slightly less than half coming from customs duties; in the following year, though custom's receipts declined, the total rose to over \$295 million. The fact that in that year the net borrowing was less than three times that sum best reflects the improvement that had taken place in the method of financing the war.

Although Congress had begun to place far heavier taxes early in 1862, it took several months to get the legislation enacted and still longer before any appreciable increase in actual receipts was obtained. Such delay, in a

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certain measure inevitable in any comprehensive scheme of taxation, is one of the obstacles to its use in time of war; but it only makes more evident the necessity for such prompt and vigorous action as is possible. The deplorable results that followed from having failed to take such action earlier were seen in the measures that the government was forced to fall back upon during the fiscal year 1862-1863, particularly the legal tender issues. Since bonds were not selling readily and expenses were mounting daily, Congress again fell back upon paper money issues, virtually a forced loan. In July, 1862, another issue of \$150 million was authorized, a portion in denominations as low as \$1, and during the first three months of

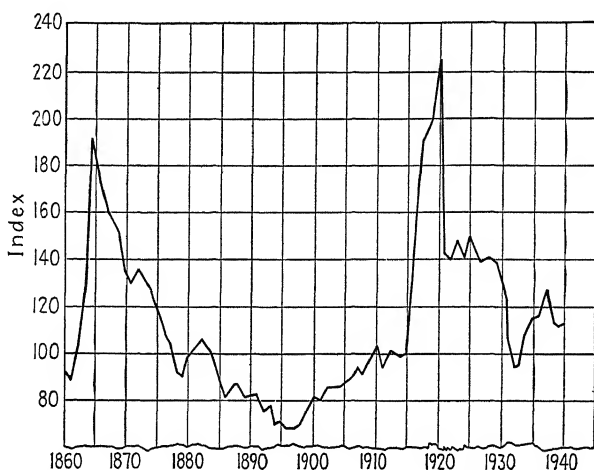


FIG. 32.—Index number of wholesale prices since 1860. (Based on Warren and Pearson and Bureau of Labor indices. 1910-1914 = 100.)

1863 still a third \$150 million. Though Secretary Chase never favored these issues, neither he nor Congress had taken the action necessary to escape them. Fortunately this marked the end of new issues; but almost the whole amount authorized remained in circulation, since they were all reissuable on receipt by the government and few of the first two issues convertible into bonds were converted before this privilege was taken away in July, 1863. The resulting redundancy of the circulating medium of course drove all specie out of circulation, put gold at a premium, and increased the price level.

The premium on gold was slight up to June, 1862, but by the following January it had risen to 45 per cent; about which point it fluctuated except for a brief drop after the July victories, until the close of the year. In 1864 there was a rapid rise to the high point, over 150 per cent in mid-summer of 1864, when the outlook as to the outcome of the struggle still appeared so uncertain. As the end came the premium had fallen back to

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around 50 per cent, but more than 13 years were destined to pass before the gold premium disappeared. The movements in the general price level were very similar to those of the premium on gold except that both advances and declines were somewhat slower. The high point of wholesale prices was reached in January, 1865, when the general level was about twice that of 1860. The resort to paper money, according to Mitchell's careful estimates, increased the cost of the war nearly \$600 million or over one-fifth of the total debt incurred, not to mention its other unfortunate effects.

The difficulties met with in trying to sell bonds, which had resulted in the increased legal tender issues, were being partly overcome by 1863. The loan act of March, 1863, authorized new issues of bonds and short-time notes and modified the terms of sale. Under the direction of Jay Cooke an elaborate campaign for selling bonds direct to the people, not unlike the late Liberty Loan drives, was undertaken, and met with marked success, nearly \$400 million being sold. At the same time a considerable quantity of short-term notes was disposed of to the banks. Such borrowing was aided by the victories at Vicksburg and Gettysburg and the strengthening of the government's credit by heavier taxation. Another factor in creating a market for government bonds was the establishment of the national banking system under the acts of February, 1863, and June, 1864. National banks were required to invest a minimum of \$30,000 and not less than one-third of their paid-up capital in government bonds; their note issues and government deposits had to be secured by these bonds. The results of this legislation were very disappointing at first. Up to the end of 1863 only a little over \$16 million of bonds had been taken by these banks and it was not until after the changes in the law made in 1864 that the amount increased rapidly, rising to \$236 million in June, 1865.

In March, 1864, Congress authorized new loans. When Chase fixed the interest rate at only 5 per cent, although this interest like that on other government bonds was paid in specie, he found great difficulty in disposing of them and again fell back upon short-term borrowing. By this time the extensive use of this method was beginning to show its dangers, for the loans were maturing and it was necessary to make provision for their payment or refunding along with new borrowing. Another disadvantage was that many of these short-term notes and certificates entered into circulation and so added to the redundancy of the currency. The total expenses of the government, excluding redemption of the debt, for the fiscal year ending in June, 1864, were \$865 million; the total debt then stood at over \$1,800 million. At this time Secretary Chase resigned and Senator Fessenden, who succeeded him, adopted a more vigorous policy.

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Under a new loan act offering somewhat more liberal terms, combined with the more promising military outlook and a second resort to the services of Jay Cooke, the Treasury succeeded in borrowing during the succeeding fiscal year over \$1,450 million, much the greater portion by the means of short-term notes. The total expenses of the government for that year amounted to nearly \$1,300 million and at the close the total government debt stood at almost \$2,700 million. During the four fiscal years ending in June, 1865, the total expenditures of the government amounted to over \$3,300 million and the total receipts from taxation were approximately one-fifth of this sum.

In addition to the expenditures of the Federal government there were those of the states and local political units. For the most part this outlay was met by borrowing, which it is estimated totaled \$500 million. The states, led by an unusually able group of governors, generally cooperated well with the central government. The outstanding mistakes in financing the war were the failure to resort to prompt and vigorous taxation, the use of legal tender notes with all its attendant evils, too extensive borrowing on short time—60 per cent of the total borrowing—and a failure to arrange the methods and terms of financing so as to facilitate the securing of funds and at the same time produce the minimum of disturbance in the country's business.

The Reaction upon the General Economic Life of the North. The changes arising out of the war involved no such general disorganization in the general economic life of the North as in the case of the South. The most important reactions were those incident to the shifting of production to provide war supplies, devising means to offset the loss of men drawn into the army, and the effects of the drain of capital by government financing and the inflation of the currency.

The presidential election of 1860 was early recognized as far more momentous in its consequences than most. When Lincoln was elected and the secession movement started, business received a setback and the financial situation became acute. In November the New York banks, followed by those in Boston, resorted to the use of clearinghouse loan certificates, making possible some relief through credit expansion without suspension of specie payment; but from Philadelphia south and west to St. Louis, except in New Orleans and Kentucky, most banks suspended. The panic, though very brief, was sharp. Its effect on general business was slight, but the repudiation of Southern debts due the North resulted in a heavy volume of failures during 1861.

This, combined with all the uncertainties and readjustments following the outbreak of war, made the first year of hostilities a rather poor one from the point of view of business in general. People acted with caution, and a spirit of thrift and moderation prevailed. By the autumn of 1862

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this phase had passed; the enormous demand for war supplies gave rise to great industrial activity and to this was added the stimulus of the general advance in the price level. From that time until the end agriculture, manufacturing, and trade flourished, profits were high, failures almost ceased, fortunes were quickly made, speculation was rampant, and extravagant expenditure became widespread. In many cases the profits of these prosperous years were swept away in the losses that followed the ending of the war. During the war many suffered seriously, but silently and little noticed, from the depreciation of the circulating medium; yet the general appearance and atmosphere seemed to betoken great prosperity.

In agriculture the crops were generally excellent, frequently larger than ever before, and the army needs combined with the years of short crops abroad enabled the farmers to secure excellent returns. The chief difficulty, the scarcity of labor, was in part overcome by the rapid introduction of farm machinery and the increased labor of those remaining at home. Mining and lumbering prospered with the greater demand for their products. Manufacturing in general flourished, particularly the branches engaged in turning out war supplies; others benefited by the increase in tariff duties, which not infrequently exceeded the internal revenue taxes and so provided greater protection; still others gained from the current extravagance in expenditures. Trade benefited from both increased volume and the rapid advance in prices. Traffic on the railroads was greater than ever before and their stocks mounted rapidly with increased dividends. Railroad construction declined, but the war gave the needed impetus which led to land grants to aid the building of trans-continental lines. The war period also brought a rapid expansion of the telegraph system. The merchant marine, however, met a different fate. The fear of capture by the Confederate cruisers led shippers to prefer neutral ships; to get this cargo and avoid the chance of capture nearly 1,000 vessels were transferred to the British flag. As a result by the end of the war American ships were carrying less than a third of the value of our foreign commerce, as compared with about two-thirds in 1860.

Among banking institutions the Civil War initiated a most important change through the establishment of the national banking system, though this was only in part a product of wartime needs. The chaotic conditions and numerous evils that had attended state banking have already been described and were the main reasons for the new legislation. Secretary Chase, vividly impressed with these evils through his own experience in Ohio, suggested such a system to Congress in December, 1861; but no action was then taken. A year later the suggestion was renewed. By that time conditions were such that there was much less objection and it could be urged that such a system would prove of benefit in the immediate

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situation as well as in the long run. The result was the National Banking Act of February, 1863. As relatively few banks were organized under the law that year—only 135 up to November—another act was passed in June, 1864, designed to make the system more attractive and remedy defects. Since the organization of national banks proceeded so slowly that the results obtained during the war period were not very great and since this legislation is therefore significant chiefly for its effects upon the subsequent development of banking, a consideration of the main provisions of the laws is best postponed.

After the changes in the law made in 1864 and the passage of state laws designed to facilitate the conversion of state banks into national banks, the number of the latter rose quite rapidly and reached a total of 642 by the beginning of 1865. The note circulation of these banks was \$66 million and they held \$176 million of government bonds. As previously stated, the market for government bonds which it was hoped to create by this system had not thus far been a large one. Nor had the act been successful in driving out very much of the state bank-note circulation. To hasten this process along with the conversion of state banks, Congress in March, 1865, imposed a tax of 10 per cent annually upon state bank notes, effective from July 1, 1866. This prohibitive tax had the desired effect of finally eliminating the troublesome state bank notes and put added pressure on the state banks to join the national system. Although complete figures are lacking, it would appear that the general policy followed by the state banks during the period of the war as a whole, though at times, such as 1862 and 1864, threatening overextension, was not a reckless one, in spite of the dangers opened up by the suspension of specie payments and the strain put upon them to meet the financial needs of the time. The increase in the quantity of money in circulation from \$435 million, or \$13.85 per capita, in 1860 to \$714 million, or \$20.57 per capita, in 1865 was chiefly due to the greenback issues; the net increase of bank notes, national and state, was probably not much over \$100 million. The large volume of financing combined with fairly high interest rates made banking profits high.

The suspension of specie payments followed by the excessive issues of greenbacks drove specie out of circulation and caused difficulty in the circulating medium. When even the small change disappeared in 1862, resort was had to individual issues of small notes and shinplasters till Congress prohibited them and provided a form of postage stamps for the purpose, and then in 1863 authorized the issues of fractional notes known as scrip. Since gold was still required for various purposes such as payment of customs duties or foreign remittances and by the government to pay interest on its bonds, a gold market sprang up in New York to meet the need. The popular notion that the speculative dealings that took place

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were largely responsible for the high premium on gold led Congress in 1864 to pass an act prohibiting such dealings. Since this deprived business of a really useful institution, it only made matters much worse, as might have been foreseen, and the law was quickly repealed. This law reflected the popular distrust and fear of financial institutions that cropped up in various forms during the war and frequently hampered financing.

Fortunately for the country the balance of international indebtedness was such that there was no very unusual loss of specie during the war. The loss of the large export trade in cotton, at least after 1861, might have been expected to produce serious difficulties; but it was partially offset by increased exports of foodstuffs so that the value of the total exports for the five years ending in June, 1865, was only about a third less than for the preceding five years. Imports for the same period declined only about a fifth so that the unfavorable balance of trade totaled about \$340 million. With the decline in the merchant marine, shipping charges shifted from the credit to the debit side of the international balance; but this was offset by the proceeds from the sale of ships. On the outbreak of the war European investors resold to this country a considerable amount of their American securities; but, beginning in 1863, a European demand for government bonds arose which increased as the premium on gold advanced and the prospects of a Northern victory improved. As a result, the net outflow of specie for the five-year period was only a little more than \$200 million. But the output of the precious metals from the mines continued to be large, for the migration to the Western mines was not stopped by the war; it was estimated that, in 1864, 150,000 people joined in the movement. For the five calendar years \$250 million of gold and silver was produced and the total coinage amounted to \$185 million. It is thus evident that the country was in the fortunate position of being able to go through the war without any real drain on its supply of specie.

In general, the condition of the laboring class was adversely affected during the period of the war. Though retail prices rose more slowly than wholesale prices, the median was about 75 per cent above the 1860 level in 1865; the increase in the cost of living, chiefly owing to the slow rise in rents, was still less, being estimated at 60 per cent in 1865. Wages lagged farther behind and increased only about 50 per cent. It was not until 1863 that any advance in the general wage level occurred, though the following year it was fairly rapid and employment was more general. Eastern factory hands secured a somewhat greater increase than common or farm laborers, and salaries advanced more slowly. Except for 1862 immigration continued unabated and for the five years amounted to over 700,000; this helped to offset the drain of men into the army. The rising cost of living gave an impetus to the organization of labor which was

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particularly marked in 1863-1864. Numerous strikes occurred, chiefly for higher wages, and for the most part were successful. Local trades' assemblies took an active part in this movement and by the end of the war such organizations existed in all important industrial centers, though they met with increasing opposition from the organizations formed among the employers. Consumers' cooperation received some stimulus in the effort to reduce living costs.

Though the war entailed no such disorganization of the business life, such marked changes in the distribution of wealth, or such general heavy sacrifices in the North as it did in the South, its effects were not over with the return of peace. Many industries were overexpanded and faced the problem of readjustment to more normal peacetime conditions. An enormous debt had been created; to pay interest upon it, to reduce the principal, and to provide for pensions necessitated heavy taxation. The paper circulating medium was still seriously depreciated and its restoration to a gold basis involved difficulties that required more than a decade to work out. Since slavery had been abolished, that troublesome source of sectional discord had been eliminated; but there remained the problems of the freedman and the economic as well as the political reconstruction of the South. Most important of all the Union had been preserved. The question as to its real character, which in the past had raised its threatening hydra heads now here and now there, was settled, though at a frightful cost. Although conflicts of sectional interests did not, and could not be expected to, disappear, the threat of secession never again was made.

The subsequent economic development of the country, to which we now turn, played no small part in promoting this result, for the steadily increasing interdependence of the different sections and the resulting larger stake of each in the well-being of the whole tended to unite all in a bond of common interests to a degree greater than ever. At the same time this economic development increased the number of national problems that could be dealt with effectively only by a power as broad as that of the Federal government. That the power of that government was now firmly established, even though subject to the limitations of a Constitution drawn up at a time when many of these problems were undreamed of, was of no small advantage in helping to solve them.

The ultimate losses to the people of both sections that would have followed from a victory for those who fought for secession can be better understood today. Slavery, the immediate cause for raising the issue, was doomed, both economically and morally. Its existence in the country today is inconceivable. The right of secession was a relic of bygone ages; it reflects the spirit and conditions of the life of the colonial period. The whole trend of the world's development taught, and still teaches, that progress, economic, political, and social, lies in the direction of steadily

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increasing the varied forms of cooperation between mankind throughout the world. Secession ran contrary to such cooperation; the maintenance of the Union, assuming it could be governed with wisdom and a spirit of self-sacrifice for the commonweal, was in the line of social progress. That might, at least in this case, chanced to rest on the side of the Union meant more for the future of the nation and its people than can easily be appreciated even today.

CHAPTER XXIX

POPULATION, ITS MOVEMENTS, AND THE PUBLIC LANDS

Introduction. War weary, the whole nation welcomed the end of the fratricidal struggle and returned to peacetime activities with their problems of readjustment. The population continued to grow at a rapid, though somewhat diminished, rate; immigrants poured in in steadily increasing volume; the vast areas of the West, still unsettled, continued to provide economic opportunity for the growing numbers; the task of opening up and developing the nation's rich resources was again resumed.

Vast as was the expanse of fertile land it was not unlimited. With the great growth in population this land was taken up more rapidly than ever before until the time came, about the close of the century, when it could be said that the supply of free, fertile land suitable for ordinary methods of cultivation had practically come to an end. The frontier had disappeared; the preliminary task of settling the land and opening up its resources was finished. This marked the end of one great epoch in the nation's economic history and the twentieth century ushered in another with new problems. It was an event of the greatest significance—an event the widespread reactions of which can be understood only as the full record of the period is unfolded.

The Growth of Population. The outstanding fact in the history of population growth during the period to which we now turn is the decline in the rate of growth, though it still remained relatively high till the first World War. Previous to 1860 the rate of increase had been more than a third every decade; in the three decades ending with 1890 it averaged little more than a quarter for each decade; in the two succeeding decades it fell to about one-fifth; during each of the next two decades, though made somewhat abnormal by the war, it was only about 15 per cent. In short the rate of increase had fallen to less than half that which prevailed before 1860. After 1930, moreover, another decided drop occurred, the rate of increase during the decade ending in 1940 being only 7.4 per cent. A consideration of the factors entering into this result may be postponed for the moment; here it must suffice to note that through this increase the total population of continental United States rose to 50 million in 1880 and to over 131 million in 1940. The chart on page 551 shows the growth by decades; that on page 509, the growth in certain

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other countries. As the latter chart indicates, the United States had surpassed France in population before 1870 and Germany before 1880.

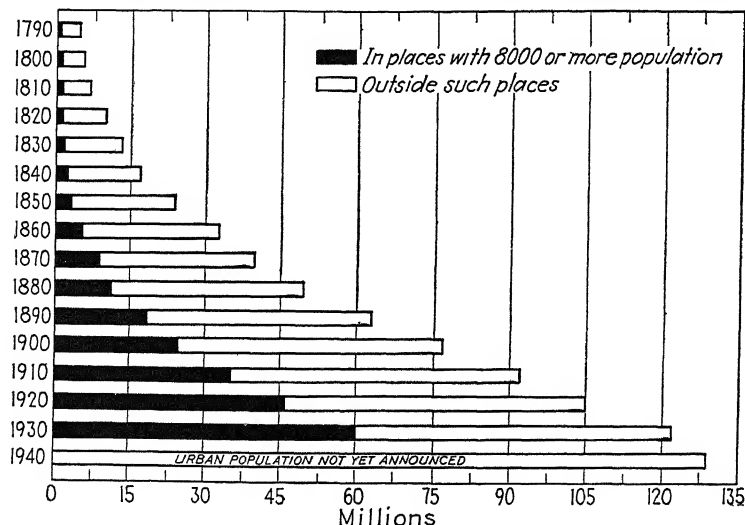


FIG. 33.—Total population of the United States and population in places of 8,000 inhabitants or more at each census, 1790–1940.

The only countries in the world having a greater population, if we do not count the British Empire as a unit, are China, India, and Russia.

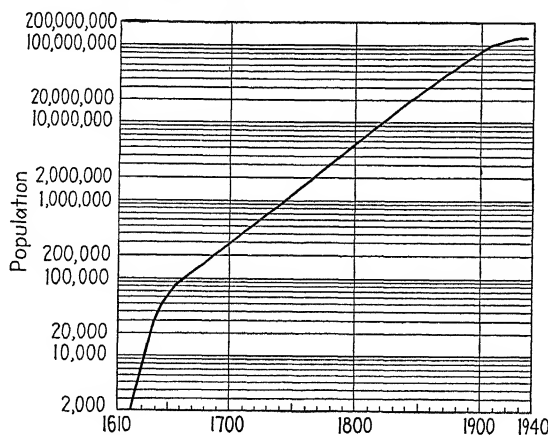


FIG. 34.—The rate of population growth, 1610–1938. (Reproduced from National Industrial Conference Board, “Studies in Enterprise and Social Progress.”)

The basic importance and great significance of this growth in the country’s population can scarcely be too strongly emphasized. Speaking about it over 50 years ago when the population was less than half what it is today, an Englishman, Sir Robert Giffen, remarked,

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The phenomenon is also without a precedent in history. There has been no such increase of population anywhere on a similar scale, and above all no such increase of a highly civilized and richly fed population. The increase is not only unprecedented in numbers, but it is an increase of the most expensively living population that has ever been in the world. . . . [It] is perhaps the greatest political and economic fact of the age. The fact has altered in the first place the whole idea of the balance of power of the European nations. . . . Now the idea of a new Europe on the other side of the Atlantic affects every speculation, however much the new people keep themselves aloof from European politics . . . European governments can no longer have the notion that they are playing the first part on the stage of the world's political history. And this sense of being dwarfed will probably increase in time.¹

Even though the rate of increase declined, subsequent events well justified the great importance attributed to it by this statement.

Even with this increase, the density of population still remained far below that of the more advanced countries of Europe. In 1920 the United States had 35 inhabitants per square mile as compared with 389 in the United Kingdom, 328 in Germany, 184 in France, and 635 in Belgium, the highest in Europe. By 1940 the figure for the United States had risen to 44. Though it would thus appear that there is still room for an enormous expansion of population before this country approaches a density such as exists in western Europe, it must also be remembered that the large portion of its area comprised by the semiarid section of the West is incapable of supporting a dense population. However, the portion of the country east of the semiarid section may fairly be compared with western Europe. If we consider the section included in the tier of states from Louisiana north to Minnesota and eastward to the Atlantic, approximately all east of the 95th meridian, a section that includes little more than a third of the land area but four-fifths of the population, we find that even there the density of population in 1940 was only 90 per square mile. The population in this area alone could rise to over 200 million before it reached the density that exists in France, and France, it will be remembered, is predominantly agricultural and relatively self-sufficing, though having a lower standard of living than the United States.

If we consider the still smaller areas of separate states, we find that there are only ten of them where the density rises to over 100 per square mile, all but Illinois and Ohio bordering on the North Atlantic coast; there are only three, New Jersey, Massachusetts, and Rhode Island where it rises to over 500, the highest figure, 667, being reached in the last named. Though other factors enter into the problem, it is obvious that the possibilities for growth of population are still very great. However, as will subsequently be explained, the likelihood of attaining any such

¹ GIFFEN, ROBERT, "Economic Inquiries and Studies," London, 1904, II, p. 22.

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density of population as prevails in western Europe, even in the regions east of the Mississippi, seems very remote.

As the growth of population was a product of the birth rate, the death rate, immigration, and emigration, we now turn to a consideration of these factors in the problem.

Immigration and Emigration. The annual number of immigrants during this period is shown by the chart on this page. The fluctuations coincided closely with periods of business boom and depression, but the general trend was steadily upward until, in the decade preceding the

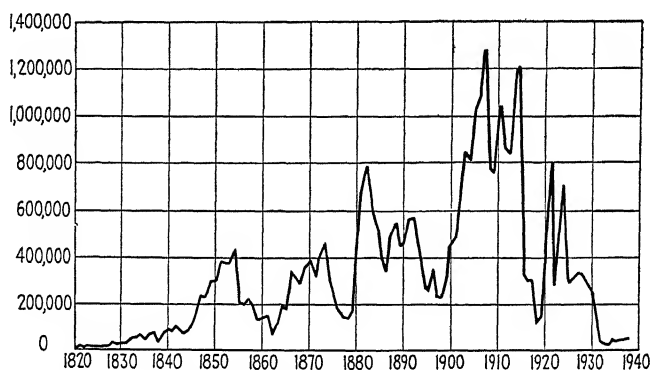


FIG. 35.—Immigration into the United States since 1820.

outbreak of the first World War, the number of immigrants averaged over 1 million a year. Nearly a third of all the 32 million immigrants who came to the country in the 95 years between 1820 and the outbreak of the war in 1914 came in the last 10 years of this period. The war cut off this influx and the severely restrictive legislation that followed has now reduced the number to a very low figure.

Returns showing the number of emigrants are not available previous to 1908. It is clear, however, that during this period there was a marked increase in the number of immigrants who subsequently returned to Europe. These so-called birds of passage increased in number with the growth of immigration from southern and eastern Europe. A new feature in the emigration movement appeared about the beginning of the twentieth century with a marked increase in the number of Americans—coming chiefly from the Middle West—who, as desirable homestead sites became scarcer, moved across the border to take up land in western Canada. The statistics that are available since 1908 indicate that the number of aliens who left the country averaged about one-third of the number that entered the country during this period.

Though there were some decades when the net result of these movements was a greater rate of increase in the foreign-born than in the native-

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born population, the final outcome shown by the Census of 1920 was the same proportion of foreign-born in the total population as in 1860, that is, 13 per cent; by 1930, it had dropped to 11.6 per cent. It has sometimes been asserted that this increase in the foreign-born population has been at the expense of the native-born; that had there been no immigration there would have been just as great an increase in the total population. No positive proof or disproof of such an assertion is possible. Although it is probable that the influx of immigrants may have had a *tendency* to check the increase of the native population, it seems highly improbable that under the conditions existing during the nineteenth century this tendency was of sufficient influence to have had an appreciable effect. An attempt to estimate the amount of the growth in the country's population that was due immediately to immigration arrivals was made by Thompson and Whelpton; their study led to the conclusion that it was about 5 per cent from 1800 to 1830, was 15 per cent from 1830 to 1840, averaged around one-third from 1840 to 1910, and in the next two decades fell to little over one-fifth.

The "New Immigration." The most important feature in the history of immigration during this period was the change that took place in the countries from which these people came. Previous to 1865 practically all the immigrants had come from northwestern Europe, chiefly from the United Kingdom and Germany; they were of substantially the same origin and stock as those that had settled the colonies. From that date down to the first World War there was a steadily increasing proportion of immigrants from the countries of southern and eastern Europe. This has contributed a type that has been called the "new immigration," which is sometimes spoken of as really dating from 1883. The reason for choosing this date is that until that year, though marked fluctuations occurred, there was no decline in the absolute number of immigrants coming from northwestern Europe; the largest number on record, over 560,000, came in 1882. During these years the United Kingdom and Germany continued to send over large numbers and beginning about 1880 there was a considerable influx from the Scandinavian countries. After 1882, however, the number steadily declined, the drop being most marked among those coming from Germany.

In the meantime, the number coming from southern and eastern Europe was constantly rising. Only once above 1,000 in any year before 1850 and never above 4,000 until 1869, it was always above 100,000 after 1886 and reached nearly 1,000,000 in 1907. Italy, Austria-Hungary and Russia contributed by far the greater part of this "new immigration." The proportion of all immigrants coming from southern and eastern Europe, never as high as 3 per cent until after 1870, was regularly between two-thirds and three-quarters of the total from 1898 until the war. The

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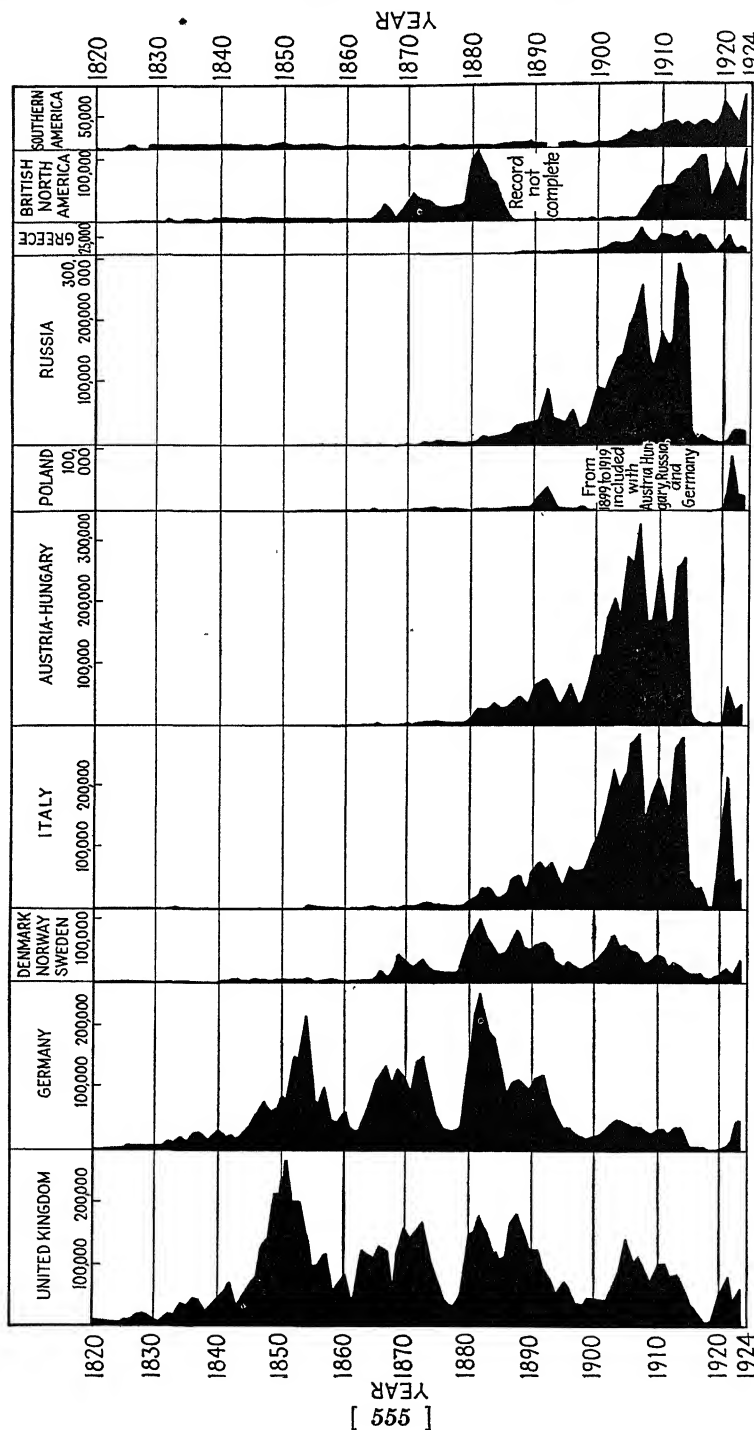


Fig. 36.—Immigration into the United States from principal countries of origin, 1820–1923. (Monthly Labor Review, U.S. Department of Labor.)

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proportion coming from the countries of the "old immigration" fell to between a fifth and a quarter of the total. However, the war and subsequent legislation have since completely changed the situation, as will shortly be explained. The chart on this page, covering 100 years since regular statistics began to be gathered, shows the total contribution of each of the leading countries to the immigrant stream during that period. The contribution of countries outside of Europe has been slight, less than a tenth of the total.

In the migration of the period since 1860 economic motives have played a part that was even more predominant than ever before; the

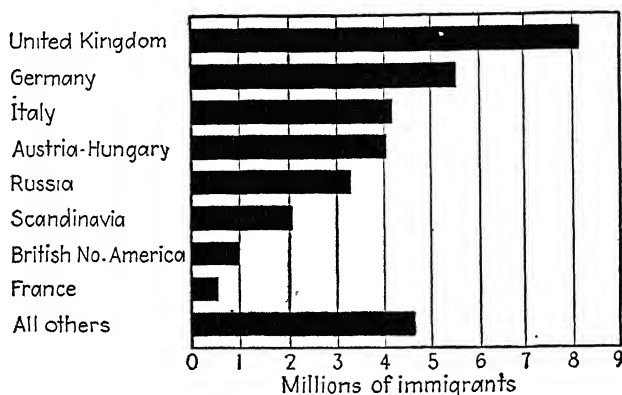


FIG. 37.—Total immigration into the United States by chief countries of origin, 1820-1920.

desire for greater political freedom and the wish to avoid military service or to escape religious persecution still exercised some influence. In recent years, chiefly from about 1900 down to the war, the proportion of males among the immigrants has risen to 70 per cent as compared with 60 per cent before that date; this reflects the large number that came without their families, often with the expectation of returning as soon as they had accumulated some savings. The proportion of those who returned to Europe at this period is particularly high, nearly 40 per cent, in the "new immigration." This differed from the old in several respects: over 35 per cent were illiterate as compared with less than 3 per cent among the latter; the proportion of unskilled laborers was larger and the proportion of Protestants was much smaller; for the most part they tended to concentrate in the chief industrial or mining centers. As the number increased with great rapidity, it made the process of assimilating the large foreign colonies so formed particularly difficult. Combined with other factors, these changes in the character and volume of the immigrant stream finally resulted in a complete change in the policy concerning immigration legislation.

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Immigration Restriction Legislation. The policy underlying such slight legislation as the Federal government enacted up to 1860 had been favorable to immigration; it was not until the seventies that signs of a change in attitude began to appear. Chinese immigrants began coming to California immediately after the gold discoveries and in the following decade much coolie labor was brought over to aid in railroad construction. Opposition appeared almost from the first and riots took place; but the state legislation passed to check the influx was declared unconstitutional and so an agitation was started to secure action by the Federal government. Following a treaty with China in 1880, a law was passed in 1882 which excluded all Chinese laborers and in one form or another this has been continued ever since. The same year brought the enactment of the first general immigration law which levied a head tax of 50 cents, to be used for meeting expenses connected with the regulation of immigration, and prohibited the admission of convicts, lunatics, idiots, and persons likely to become a public charge. Three years later, in 1885, another law forbade the importation of contract labor.

In 1891, to secure a stricter enforcement of the laws, complete control was taken over by the Federal government. Inspection on the Canadian and Mexican borders was first provided for, and certain other classes were added to the inadmissible list. At this period a literacy test was first proposed, but a bill to impose it was vetoed by President Cleveland in 1897. Continued agitation led to minor additional restrictions during the next two decades, including an agreement made with Japan in 1907 to exclude Japanese laborers owing to the opposition aroused by the considerable increase in the number of immigrants from that country after 1899.

However, it was not until after the first World War that severely restrictive legislation was enacted. This was preceded by a law, passed in 1917 over the President's veto, that imposed a literacy test, raised the head tax to \$8, and added various minor restrictions. The legislation that followed the close of the war was due to a variety of causes. Underlying all was the steadily increasing opposition to the large influx of immigrants and the difficulties arising out of the economic, political, and social problems involved in their assimilation. The fact that the supply of free fertile land was practically exhausted, it was argued, decreased the need for immigrants and increased the difficulties in their assimilation. Organized labor was more influential politically than ever before and better appreciated the importance of restricting immigration in order to protect the interests of labor.

The war and its aftermath produced added arguments for restriction. It had shown certain difficulties that arose from having a large group in the population of alien birth and interests; the economic reaction from

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the war resulted in the appearance of a business depression in 1920 and left a large number of unemployed, and it was feared that the economic difficulties under which Europe suffered would soon lead to a larger influx of immigrants than ever before. Under these circumstances a law was enacted in May, 1921, that marks the beginning of a new period in our immigration history.

The outstanding feature of this law limited the number of alien immigrants to be admitted in any one year from any nation to 3 per cent of the number of people born in that nation and living in the United States as shown by the Census of 1910. This did not apply to natives of countries in North or South America nor to those of Asiatic countries already restricted. This restriction had two main objectives: (1) to cut down the total number of immigrants, (2) greatly to reduce the immigration from southern and eastern Europe. One result was that the total number of immigrants, natives of the countries to which the law applied, was limited to less than 360,000 a year, or about a third of the number that had been coming in the years of the decade preceding the war. The second result was an enormous reduction in the number admissible from southern and eastern Europe, for on the basis chosen for fixing the number of admissibles—and it was chosen for this purpose—the proportion of those born in southern and eastern Europe, the countries of the “new immigration,” was little more than half of the total of admissibles from all European countries; just before the war those countries had been contributing over three-quarters of all the European immigrants.

Actually this law reduced the total of those admissible from these countries to about one quarter of the number that had been coming just before the war; the number admissible from countries of the “old immigration” was substantially the same as the number that had been coming before the war. This law was to remain in force for about a year, but it was subsequently continued with slight changes until superseded by the still more strict law of May, 1924. During this period the countries of the “new immigration” sent over practically their full quota, and there were many instances where those of the “old immigration” also filled their quota.

The act of 1924 cut the percentage figure to 2 per cent. More significant was the provision substituting as a basis the number of foreign-born of each nationality living in the country at the Census of 1890, instead of that of 1910. The lower percentage combined with the smaller number of foreign-born in the country at the earlier date resulted in reducing the number admissible under this law to about 160,000 a year. Since there were relatively few foreign-born from the countries of southern and eastern Europe living in the United States in 1890, the choice of that year as a basis meant that only about 20,000 of the total number admissible

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could come from the countries of the "new immigration." In short, immigration from Europe was practically confined to the "old immigration," from countries where so-called Nordic stock predominated. Another provision of the law replaced the previous restrictive agreement and definitely excluded immigrants from Japan. Evidently the time had come when the nation no longer wished to serve as a "melting pot" and haven of refuge for the nationalities of the world.

Another provision of the act of 1924, which became effective July 1, 1929, substituted a slightly different basis for that first put into effect by this law. This new basis was the national origin of the whole population of the country in 1920. Each quota country was allowed the proportion of a total of 150,000 which people of that national origin in the population of 1920 bore to the total population; however, the minimum quota for any country was to be 100. With these minimum allowances the total number admissible from all quota countries was fixed at 153,714. Although the national origins basis only slightly reduced the total, it did shift the quotas somewhat. The chief gains went to Great Britain and north Ireland; the chief losses fell to Germany, the Irish Free State, and the Scandinavian countries. Following the advent of the depression starting in 1929, the normal tendency for immigration to decline at such a time was augmented by the adoption of a policy of issuing visas only to such as were not likely to become a public charge. As a result the average number of immigrants for the years 1932-1938 fell to less than 40,000 and was exceeded during five of these years by the number of alien emigrants.

The Composition of the Population. As a result of the immigration movement of the period, the foreign-born made up 11.6 per cent of the total in 1930. Of the foreign-born population less than 40 per cent came from countries of northwestern Europe as compared with over 77 per cent in 1890 and over 90 per cent in 1860. The number of Negroes was nearly 11,900,000 as compared with nearly 4,500,000 in 1860; but, since this element in the population had increased less rapidly than the whites during every decade, it made up less than 10 per cent of the total in 1930, as compared with over 14 per cent in 1860 and nearly 20 per cent in 1790. The Indians numbered about 332,000, the Japanese about 139,000 and the Chinese about 75,000, the last having decreased nearly two-fifths from the high point reached in 1890.

The Declining Rate of Increase in the Population. Attention has already been called to the steady decline in the rate of increase in the population. This was the net result of changes in the birth rate, the death rate, immigration, and emigration. Since the effects of the last two factors during this period have been surveyed, the first two remain for consideration. Figures for the birth rate and death rate covering the whole country

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are not available even today, and those available for the individual states do not generally go back very far. Still it is possible to draw certain general conclusions which are reasonably safe.

That there was a marked decline in the death rate during the nineteenth century is unquestioned. Most of this gain occurred during the last quarter of the century; by 1900 the death rate in the registration area had fallen to 17.6 per 1,000 of population, whereas in Massachusetts it had been 27.8 in 1789 and 21.4 in 1855. Since then even more rapid gains have been made and by 1937 the death rate had fallen to 11.2 per 1,000. It is to be expected, however, that with the growing average age of the population this rate will soon start to rise, possibly reaching 14.5 by 1980. The great advances in medical science and public hygiene during the period are primarily responsible for this lower death rate, the most striking results being seen in the decrease of infant mortality.

The consequent marked prolongation of the average length of human life is obviously of the greatest significance. How much was gained during the nineteenth century cannot be accurately determined, but figures from Massachusetts suggest that the average expectation of life at birth had risen from under thirty-five years near the close of the eighteenth century to around forty-five years near the close of the nineteenth century, the greater portion of this gain being achieved in the last quarter of the period. In the twentieth century a more rapid rate of gain has prevailed, and data for the United States as a whole indicate that at present the figure is over 60 years. It should be understood, however, that this increase in the expectation of life has been most marked in the lower age groups. Judged by the Massachusetts figures, the increase between 1789 and 1929 was at birth 68 per cent, at twenty years of age 36 per cent, at forty years of age 14 per cent; at sixty years a slight actual decrease appeared. That such a gain was important economically, to say nothing of the human elements involved, is obvious, for the additional years gained have been extended to include what is for most the more productive period of life. Since this prolongation of life tended to increase the rate of growth of the population, it is clear that the actual decline in that rate must be found in a lower birth rate.

That there has been a marked decline in the birth rate in the country is also unquestioned, though here also adequate statistics are lacking. The best estimates indicate that the crude birth rate per 1,000 white population fell from 55 in 1800 to 41.4 in 1860, 30.1 in 1900, and 20.1 in 1930. Using as a more accurate basis the number of white women from fifteen to forty-four years of age, the rate fell from 278 in 1800 to 87 in 1930, or a decline to 31 per cent of the former figure as compared with 37 per cent in the case of the crude rate. The birth rate varies greatly among different elements in the population. Generally it is high among

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the foreign-born, somewhat lower among the native-born of foreign parents, and lowest of all among the native whites of native parents. Among the Negroes, chiefly those in rural districts, it is somewhat higher than among whites. For corresponding groups it is commonly lower in urban centers than in rural districts. Among certain small groups of the so-called native stock, the decline in the birth rate has gone so far that they do not appear to be keeping up their own number.

The effects of the declining birth rate are reflected in the decreased proportion of children in the population and in the smaller size of the family. Thus in 1900 among the white population the ratio of persons twenty years and over to all children under sixteen was practically double what it was in 1790. However, the effects of immigration somewhat exaggerate this change. In 1900 the average size of the family for the whole population was 4.6 persons as compared with 5.7 persons for the free population in 1790. Had the families of 1900 averaged the same size as those of 1790 the population of the country would have been nearly 20 million greater. It is evident that, except for the years since the outbreak of the first World War when the changes in immigration and emigration were an important factor, the declining birth rate, more than offsetting the effects of the lower death rate, is the main cause of the slower rate of increase in the population of the country that has prevailed since 1860. The 1940 census gives 3.8 persons per family.

The causes underlying this declining birth rate are complex and not susceptible of accurate determination. The phenomenon, however, as we have seen, is not peculiar to the United States but is found also in the more advanced countries of western Europe. In part it is due to shifts in the age groups and racial constituents in the population and also to the movement to urban centers, but the chief explanation is generally attributed to the desire to raise the standard of living. In this country better education has helped to create greater foresight and sense of responsibility to the children; at the same time it has increased the number of economic wants and the intensity of the desire to satisfy those wants. The prolongation of the period of training or education, together with the desire to start married life under more favorable economic conditions, have tended somewhat to increase the age at marriage. Women are far more easily able to earn their own living and remain independent if they choose; not infrequently the greater opportunity thus afforded to women to contribute to the family income when the man's earnings were low has also served to hasten marriage. Today children are not an economic asset to a family at so early an age, and the economic burden of their upbringing not only is borne for a longer period but it is a heavier burden. Whether, as some have suggested, the intensity and strain of modern life have actually reduced the reproductive capacity of the race is uncertain;

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but it seems improbable that, at best, this could be more than a minor factor in the outcome. Thus the main causes for the slower growth of population are found among what Malthus called the "preventive checks."

Doubtless it is true that among the poorer classes, even in the United States, the positive checks are a factor. There are certainly many families whose income is insufficient to maintain them in proper physical condition and where, in consequence, the death rate is increased. But this is a minor factor and, generally speaking, it cannot be claimed that in this country population has pressed upon the means of subsistence. The predominating influence of the preventive checks means rather that the desire for a higher standard of living has pressed upon the increase of the population. It is unfortunate that this influence is least marked among the classes whose limited means make them less able to bring up their children in the most desirable ways and that it is commonly most in evidence among groups who could best provide for such upbringing.

However, it would be difficult to overemphasize the importance of the consequences in our economic and social life of this growing preference for raising the standard of living rather than for increasing the size of the family. The opposite choice would only tend to reduce the condition of the people to a standard of living at a mere subsistence level. Of course such a tendency might be modified or more than offset by developments increasing the per capita productivity of the nation. The choice made promotes the attainment of that richer and fuller life, so dependent upon economic well-being, which Western civilization appears to have set up as its ideal.

With an immigration policy that nearly if not entirely eliminates an increase from this source, with a declining birth rate, and with the imminent prospect of a rising death rate, it is obvious that the country must look forward to a time, not far distant, when its population will cease to grow, and may decline. The numerous uncertain factors in the problem make exact prediction impossible but various calculations that have been made indicate that a stationary level may be reached some time within the next 25 years and that the country will then contain somewhere between 140 and 160 million inhabitants. The attainment of that level will be accompanied by a marked change in the proportions of the constituent age groups in the population, though chiefly in the groups under twenty and over sixty years of age. The latter may be doubled or tripled, and the former nearly cut in half.

The phenomenally rapid growth of the population of this country during the three centuries following the first settlements has been a factor in its economic, political, and social development, the significance of which can scarcely be exaggerated. It should be unnecessary to point

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out that such a complete change in the situation as appears to be in prospect must involve consequences of the most widespread and fundamental character for our future development. The ways in which this change is likely to react upon various lines of economic activities in the future is a question that should be kept in mind in reading the subsequent accounts dealing with those activities down to the present.

The Acquisition of New Territory. Before we turn to an account of internal movements in the population, it is desirable to have as a back-

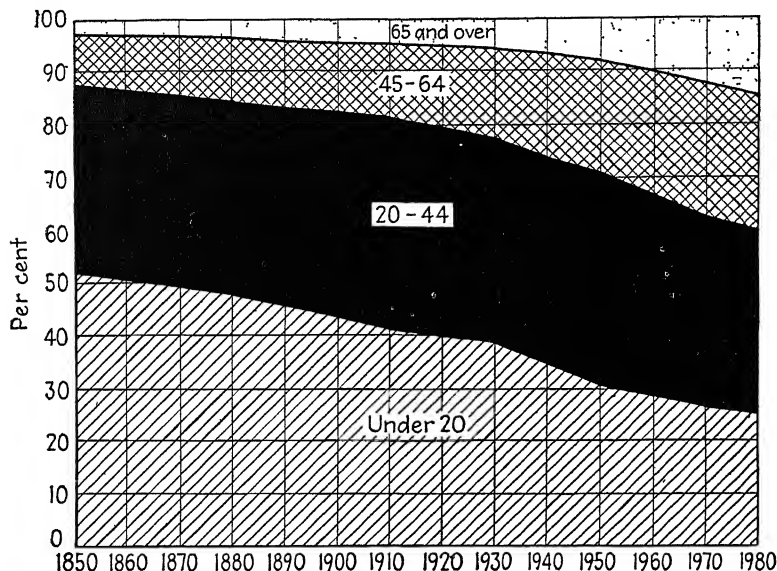


FIG. 38.—Proportion of population in each age distribution of total population, 1850–1980; estimated after 1930. (Based on *Fifteenth Census of the United States* and “*Problems of a Changing Population*,” National Resources Committee.)

ground an understanding of the legislation affecting the disposition of the public lands to which so many people moved during this period. This may well be preceded by an account of the nation’s territorial expansion.

The acquisitions of territory during this period mark a distinct break from previous acquisitions in that none of them was made up of contiguous territory. Alaska with nearly 600,000 square miles was acquired from Russia in 1867 for \$7,200,000, a sum that today appears ridiculously small though at the time it was considered excessive, so slight was the appreciation of Alaska’s resources and its future value. At the time, the sealing rights were considered the most valuable feature of this purchase; later other fisheries sprang up; and the vast mineral resources, not fully explored even yet, have only begun to be developed. In 1898 the Hawaiian Islands were annexed, chiefly for strategic reasons, though the action was

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facilitated by a considerable group of American settlers, especially the sugar planters, whose product had been admitted to the United States free of duty under the treaty of 1875. About the same time a few other small islands in the Pacific were obtained.

The Spanish-American War, originating in the desire to put an end to the chaotic conditions existing in Cuba, led to the acquisition of Puerto Rico, the Philippines, and Guam. This action, particularly the taking over of such distant territory as the Philippines, was considered a new departure in the policy of expansion; it was claimed that it meant embarking upon a policy of imperialism similar to that of European nations. In certain respects this was true. Though the country had shown expansionist tendencies from an early date, all of the territory acquired down to 1898, except Alaska, had been contiguous and in all cases it had been land that had already attracted American settlers. The case of the Philippines was different. Theretofore nobody had dreamed of acquiring them, but once seized the possibilities that they offered for investment of capital, for development of commerce, and for adding to the economic resources of the country began to be emphasized and played some part in their retention. There was also the fear that some other nation would get them.

The semitropical regions thus acquired from Spain were valuable in that they supplied certain products not obtainable within the United States. That advantage was not taken of the opportunity to acquire Cuba, long coveted by many and far more valuable than the other islands secured, showed much greater restraint than was common among world powers. However, certain rights, recently given up, were reserved under the Platt Amendment to the treaty of 1903. In 1904, under pressure, the Panama Canal Zone was acquired in connection with the undertaking of the canal and in 1917, for strategic purposes, the Danish West Indies. Reversing this policy of expansion, this country has offered the Philippines independence, starting in 1946.

Though our treatment of these possessions is doubtless not entirely free from instances of what might be considered as exploitation, still it will compare favorably with that of European nations toward their more backward colonies. There is little question that the inhabitants of the territories acquired have in general benefited under American control: greater peace and social order prevail; education and social hygiene have been greatly advanced; many public improvements have been provided; capital for development has been more easily obtainable; and commerce has been stimulated to the economic advantage of the possessions as well as of the United States.

The Public Land Legislation. The struggle of the West to secure free land had attained success with the passage of the Homestead Law in

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1862. With this outcome the question of the public lands ceased to have the prominence it had secured during the preceding period. In truth this result was also due to the fact that the disposition of the public domain was no longer connected with some of the problems with which it had been bound up theretofore. Slavery had disappeared and, as receipts from the public lands were relatively insignificant, they were no longer a factor in the fiscal condition of the government and so severed the connection between this question and the tariff. Though the issue of using the public domain for internal improvements or other social purposes

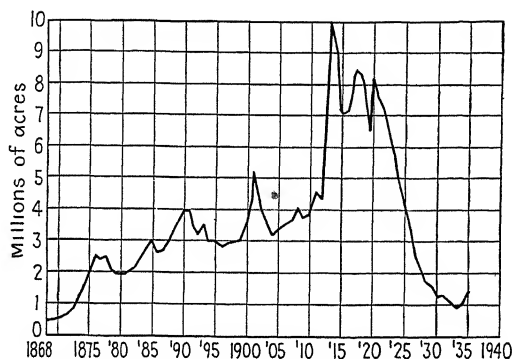


FIG. 39.—Final homestead entries, 1868-1935.

still remained, it received, unfortunately, far less public attention than theretofore. Thus the conflicts of economic interests affecting public land legislation were greatly simplified; the East rather ignored the problems involved and the West was given free rein to do about as it wished with the vast resources which it practically claimed as its own.

The main problems that arose during this period were connected with the entirely different character of the region that was being opened up. The previous legislation had largely been framed to suit conditions in Eastern farming land; but, as more and more of the region suitable for ordinary farming purposes was taken up and people began to develop the resources of a different character in the Far West, it was obvious that new legislation suited to the conditions of that section was necessary. The policy underlying this legislation was largely governed by the wishes of the West. It was in line with the general trend of the policy during the preceding period which tended to make the public domain more and more easily accessible and to hasten the process of developing its resources.

So successful, from this point of view, were the results of this policy that by the close of the century the supply of free and fertile farming land had almost disappeared, and most of the valuable mineral and timber lands had passed into private hands. The nation then suddenly awoke to

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the fact that its natural resources were not inexhaustible, that much was being wasted, and that more consideration for the needs of the future was essential. Thus the movement for conservation arose and, in the twentieth century, legislation, though facing strong opposition from local Western interests, began to reflect a reaction against the free and easy methods in disposing of the public domain that had theretofore prevailed.

Among the important laws of this period that had particular application to lands of the Far West, the first was the Mineral Land Act of 1866, soon supplemented by the Mining Act of 1872. Theretofore much valuable mineral land had been sold as agricultural land and this was the first general act, though there had previously been some laws regulating such sales in certain districts. Under this legislation mineral lands were sold in limited amounts at from \$2.50 to \$5 an acre. In 1873 the first general act applicable to coal lands was passed providing for sale of quarter sections at not less than \$10 an acre when over 15 miles from a railroad and at not less than \$20 an acre when nearer. Though these prices were often far below the value of the land, no effort was made to obtain more than the minimum price until 1906.

The year 1873 also saw the passage of the Timber Culture Act providing for a grant of a quarter section on condition that timber was planted on a small portion—eventually only 10 acres—and kept growing for a few years. About 10 million acres were disposed of under this law but, as very little timber and considerable fraud resulted, the law was finally repealed in 1891. The Desert Land Act of 1877 allowed a person to take up a full section of 640 acres of land, not sufficiently watered to raise a crop, provided it was irrigated within three years and a payment of \$1.25 an acre was made. Since this proved too large for a farm cultivated under irrigation, in 1891 the amount that could be taken up was reduced one-half and only one-eighth had to be irrigated; but residence was required.

The Timber and Stone Act of 1878 allowed the purchase of 160 acres of nonmineral land, unfit for cultivation and valuable chiefly for timber or stone, at a minimum of \$2.50 an acre. Up to 1908, since when it has been appraised, such land was sold at the minimum price, generally far below its real value. Originally this law applied to the Pacific coast states and Nevada, but in 1892 it was extended to the rest. Though it was the intention of the law that the timberland so acquired should be developed by the person making the entry, who had to swear that he purchased it for his own use and benefit and not for resale and speculation, this was seldom the result. Much of the timberland so disposed of went to dummy entrymen who soon resold it to the large timber companies. In 1891 the old Preemption Law was repealed, whatever conditions once justified it having long before disappeared.

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Toward the close of the century the supply of free land suitable for ordinary farming had nearly disappeared; yet vast tracts of the public domain still remained, chiefly in the semiarid West. The land in this section fell roughly into four classes: (1) that suitable for cultivation either with or without irrigation; (2) the desert land; (3) the forested area, between 10 and 20 per cent of the total and chiefly valuable for timber or protecting the water supply; and (4) that suitable only for grazing. The last class made up by far the greatest proportion, probably over three quarters, of the total. The amount that could be irrigated was relatively insignificant. As Meade said,

If every drop of water which falls on the mountain summits could be utilized, it is not likely that more than 10 per cent of the total area of the arid west could be irrigated and it is certain that, because of physical obstacles, it will never be possible to get water to even this small percentage.

However, as free land grew scarcer, irrigation was increasingly resorted to. Private irrigation projects, generally on a small scale, first became common in this region in the eighties. In 1894 the Carey Act provided for grants totaling 1 million acres each to most of the states in this section, the state being required to supervise the construction of irrigation projects and dispose of the land, against which the cost of the project was charged to settlers on easy terms.

To meet the need for larger enterprises Congress passed the Reclamation Act of 1902. Under this law most of the proceeds from the sale of public lands in the semiarid states was put in a revolving fund to be used by the Federal government in the construction of irrigation projects. The cost was charged against the land irrigated, payable over a period of years, and this land was then disposed of in tracts of from 20 to 80 acres under homestead entry. It is under this law that the great projects such as the Roosevelt dam have been constructed. During the period down to 1937, \$300 million had been spent on the construction of those undertakings which furnished complete water supply to over 1,700,000 acres as well as to some sections outside the projects in private hands. The value of the crops raised on the government projects in 1936 was nearly \$79 million and averaged nearly \$50 per acre. In general the work has been successful, though errors in planning and the uniform charges made, where the land varied greatly in fertility, have caused some losses.

However, as previously indicated, the possibilities for irrigating Western lands are extremely limited and legislation was needed to further the development and conservation of the resources in the vast portion of the remaining public lands where irrigation was impossible. In 1909 the Enlarged Homestead Act opened up semiarid land in most of the

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Western states to homestead entries of 320 acres; in 1912 the homesteading period was reduced to three years. In 1916 the Stock Raising Homestead Act provided for homestead entries of 640 acres on grazing land but with no provision for commutation, and the subsoil mineral rights were retained by the government. Most of the considerable increase in homestead entries that occurred during this period can be attributed to these new laws. The practice of commutation declined but the acreage finally patented to the homesteaders came to be not much more than half of that for which entries had been made. On most of this grazing land, as had long before been pointed out, several times the amount of land allowed by the stock-raising law was necessary to provide a living. Many homesteaders of these years learned this from cruel experience.

Throughout this period land continued to be disposed of by grant, some under grants made in the preceding period and some under new ones. The grants of public land for schools, generally made when the state was admitted to the Union, had been increased to two sections in each township in 1848 and from 1894 on, with one exception, to four sections. The policy of making grants for the support of universities was also continued during this period and frequently on a more liberal scale. A new grant for advanced education was provided by the Morrill Act of 1862 under which each state was given 30,000 acres of the public land for every senator and representative that it had in Congress, the proceeds to be used for colleges where agriculture and the mechanic arts were taught. Many of the state universities and agricultural colleges owe their inception to this act, the benefits of which were later extended to states subsequently created. The total of all grants for educational purposes has exceeded 116 million acres. The states that had received a grant of swamplands continued to take up land under this right and, up to 1938, had received a total of over 64 million acres in this way. Not infrequently land so obtained was not properly swampland and until recent years few states took active measures for draining it.

The demand for the construction of transcontinental railroads, accentuated by the Civil War, and the difficulty in securing adequate financial support from private sources led to a second period of railroad land grants beginning in 1862. Nearly all of these grants were for railroads in the Far West and, except for the fact that most of them were given directly to the railroads, they were similar in character to the grants of the preceding period. However, the amount of the grant was larger, partly owing to the lower value of most of the lands through which the railroad ran. The first grant to the Union Pacific and Central Pacific railroads was 10 square miles per mile of railroad; in 1864 this amount was doubled for the portion of the roads in the territories. The grants to the Northern Pacific in 1864 and to the Atlantic and Pacific and the

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Southern Pacific in 1866 increased the amount to 20 square miles in the states and 40 in the territories.

The growing hostility toward the railroads at this period soon wrought a complete change in the public attitude and, after the grant to the Chicago and North Western in 1872, no new ones were made. Thereafter various individual grants were canceled to the extent that the railroad had not been constructed and in 1890 this forfeiture was made general. Had all the grants made to the railroads been earned, they would have received about 200 million acres. Forfeiture reduced the total about one quarter; up to date the amount actually patented is about 133 million acres. Much the largest single grant, estimated at over 42 million acres, went to the Northern Pacific. In some states these grants made up a considerable portion of the total land area; in Minnesota and Washington about a quarter; in Wisconsin, Iowa, Kansas, North Dakota, and Montana about one-fifth. Though much of the land in the Far West which was received by the railroads was of slight value, the timberland obtained by the Northern Pacific and Southern Pacific has proved most valuable and formed the basis for the three great private timberland holdings of the country. The Southern Pacific also secured land that proved to be rich in oil. The average receipt per acre sold by the railroads has been estimated to be \$5. Besides hastening construction the government in return for these grants has received some benefit in lower rates for transporting troops, supplies, and the mails.

Reservations and Conservation. Toward the end of the century, as the public domain was fast passing into private hands and the natural resources of the country were being rapidly depleted, there developed a demand that the government adopt better methods for conserving such resources as still remained in its possession. When it was realized that the output of many important natural resources such as coal, iron, copper, oil, and lumber was generally doubling every decade—in other words that each new decade saw more of these resources extracted than had been extracted in all preceding decades—it finally dawned on the country that this could not go on forever and that in certain cases the exhaustion of the remaining supply was dangerously near.

However, it was not until President Theodore Roosevelt's administration that much was accomplished, chiefly under the leadership of Gifford Pinchot. The revision of the land laws in 1891 had included a clause authorizing the establishment of forest reserves; under this and a revision in 1897 about 50 million acres had been set aside by 1901, but under Roosevelt the area of the forest reserves was nearly tripled. In 1907, under pressure of private and local interests, Congress took away from the President the right to establish forest reserves in six of the important timber-producing states of the Northwest, but by that time the supply

of good timberland remaining in the public domain outside the reserves was small. Since then there have been only small additions to the national forests, some in the southern Appalachians and the White Mountains by purchase under the Weeks Act of 1911. With the growth of forest reservations came a marked development of the forest service of the government, better precautions to check the enormous losses by forest fires, and also wiser provision for the control of the reservations so that the resources there contained were not simply locked up but made available under conditions that would not jeopardize the future supply of timber.

The movement for conservation of the natural resources of the public domain, at first chiefly concerned with the forests, soon spread to other items and the government then began to establish reservations for a variety of purposes. The most important in extent were the coal land reservations. Others included those for oil, gas, phosphate, potash, nitrate, water power, reclamation, watering places, and wild game. In addition the area of the national parks was considerably increased and numerous tracts, including so-called national monuments, set aside.

On the other hand the area of the Indian reservations was steadily reduced. As the supply of desirable lands diminished, more and more pressure was exerted to secure the opening up of these reservations to the whites. The most valuable, those in Indian Territory, began to be opened in 1889. In most cases much of the land in the reservations was divided up among the individual Indians under the Dawes Act of 1887; as time went on better efforts were made to ensure the Indians more adequate compensation. Today the unallotted area within the reservations is less than a fourth of what it was in 1880. Nonetheless the Indians who were given individual title to land seldom proved able to protect their interests against the wiles of the white man, and by 1936 they had lost two-thirds of the 139 million acres that had belonged to the tribes in 1887. In consequence the Wheeler-Howard Indian Reorganization Act of 1936 prohibited the sale of Indian land except to the tribes and set up a process for enabling the Indians voluntarily to return their individual holdings to a tribal status, which most of the tribes have accepted. This law also includes provision for aid and guidance of the Indian in the conduct of his social and economic affairs.

Commencing in 1920 there began a more active movement to facilitate the use of the various resources remaining in the public domain, under careful provisions designed not only to foster conservation but to protect and further the public interests generally. The Federal Power Act and the Mineral Leasing Act, both passed in that year, are outstanding in the legislation furthering these purposes in the case of water power and the important mineral resources. Under a system of permits and leases on a royalty basis, the government controls the development of these

mineral resources and also secures a fair return, over one-half of which goes into the revolving reclamation fund and over one-third to the states where the minerals are found. The leasing of the water-power sites under the control of the Federal Power Commission is designed to attract private enterprise into desirable undertakings and at the same time to retain such control as may be necessary to prevent exploitation and protect the public interests for the future.

Another important step in advance along similar lines was secured through the passage of the Taylor Grazing Land Act in 1934, together with an amendment in 1936, which gave the Secretary of the Interior wide powers to establish grazing districts up to a total of 142 million acres out of the vacant, unreserved, and unappropriated lands, and to regulate their use and provide for their improvement. Grazing land has long made up by far the greater portion of the remaining unrestricted area of the public domain and its reckless and uncontrolled use, chiefly through excessive stocking, is estimated to have depleted its capacity by two-thirds, not to mention the effects upon water conservation and related problems. It is stated that it will probably require 50 years to restore the former grazing capacity. In line with this legislation, the President by two orders about the first of 1935 temporarily withdrew from entry all public lands except those under the mineral laws. It is to be hoped that this will mark the end of the sorry record of neglect, waste, and exploitation which has characterized so much of the history of the public domain.

The problem of conservation is by no means a simple one. There are many instances where there is no question but that resources are used in a manner that is economically wasteful even under present-day conditions; in such instances there can be no doubt as to the advantage of checking the waste. But when it comes to the type of conservation that favors limiting the use of resources that can be used economically by the present generation so that future generations may have a larger supply, problems are raised that are very difficult to answer with assurance. This involves weighing the economic or other advantages that may accrue to the future generation against the losses to the present generation. The difficulty in doing this arises from the uncertainty as to how important the resources saved will be to the future generation, in view of the unknown possibilities in the progress of science and invention. Though the progress of science seldom makes any natural resource useless, it has wrought vast changes in the relative importance of various resources to different generations. A failure adequately to consider and balance those possible losses and gains is perhaps the most serious criticism to be brought against the conservationists. But those that have typically been opposed to the conservationist movement are open to the more serious

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charge of ignoring the needs of the future and too frequently of being concerned only with immediate private gain.

The Results of the Public Land Laws. As a result of legislation facilitating the disposition of the public domain, there remained in 1934, unreserved and unappropriated, less than 165 million acres, excluding Alaska, or about one-eighth of the original total public domain; and most of this remainder is of very little value. Of the land disposed of, the greatest item, nearly 245 million acres down to 1938, was patented under noncommuted homestead entries and more than half of this total was patented after 1900. In practice the worst feature of the homestead law was the commutation clause under which title could be obtained after a few months' residence on payment of \$1.25 an acre. Designed to protect those who found themselves unable to meet the requirement of five years' residence and also to enable the settler to borrow by acquiring title and mortgaging the land, this provision played into the hands of speculators who never intended to develop the land and simply commuted their entry to secure title and resell at a profit.

The Public Lands Commission of 1903 found counties where 90 per cent of the commuted homesteads were transferred within three months after acquisition of title and declared that "a great part of all commuted homesteads remain uninhabited." During this period, until its repeal in 1891, the Preemption Law was also taken advantage of for similar purposes. Too frequently, even where a homestead entry was not commuted, lax administration made it possible to evade the intention of the law. In connection with the rush to secure the remaining prairie lands, it has been said,

Of all the motley crowd that helped themselves to public land during the boom of the eighties not one in three had the slightest intention of remaining upon it; not one in five remained more than long enough to prove up and sell out, or "mortgage out"; and not one in ten has left a permanent mark upon the landscape of Kansas, Nebraska, or Dakota.

Commenting on the land laws in general the Commission of 1903 said that they were antiquated and did not fit the conditions of the remaining public land.

The effect of laws passed to promote settlement is now not infrequently to prevent or retard it.

The fundamental fact that characterizes the situation under the present public-land law is this, that the number of patents issued is increasing out of all proportion to the number of new homes.

The provisions of the Desert Land Act, under which over 8 million acres have been secured, were also widely evaded. Not infrequently the

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control of water supply so obtained gave the holder a practical monopoly of large tracts of grazing land. The use of grazing land in the public domain, as is apt to be the case with public property, was attended by great waste owing to reckless overgrazing and often resulted in the destruction of the pasturage. After about 1890 the best of this land rapidly passed into private holdings to ensure the stock raisers of adequate pasturage. Even under private control, though somewhat less wasteful, the deterioration was marked, nor was it absent from much of the portions of the forest reserves where grazing was allowed.

As the foregoing suggests, one of the most serious defects in the methods of disposing of the public lands has been the laxity that attended the administration of the laws. Even where the provisions of the law were adequate—too frequently they were far from adequate—evasion has been easy and the real purpose of the laws has been defeated. This result is in part owing to the fact that the administration of the laws has commonly been under the charge of people who were in sympathy with the frontier point of view that the rapid development of the public land resources was desirable—a point of view, however, which was very generally held till near the close of the nineteenth century. Unfortunately, too, collusion between government officials and private interests has been frequent. Through most of our history the public domain has been regarded as public spoils. When the older sections ceased to have much interest in the spoils, they paid little attention to what was done with the remainder so that until the present century the Western interests became increasingly dominant in both the formulation and the administration of the land laws.

Another defect in these laws was that they were frequently drawn up without adequate consideration of the economic conditions involved, chiefly found in the case of the legislation applicable to land not suited for ordinary farming. Though there were many instances of this, an outstanding illustration is found in the method of disposing of timberland in 160-acre tracts. To cut timber economically today requires vastly larger tracts, yet the law contemplated the cutting of the timber on these small lots by the original entrymen. It is, therefore, not surprising that in practice these small tracts rapidly passed into the hands of the large timberland holders. The unwillingness to grant large homestead entries on grazing land had similar results. Also it may be noted that in practice the methods used in the disposition of the land not suitable for ordinary farming, much more frequently than in the case of farm land, resulted in very large gains to individuals. Lumbering, livestock raising, mining, and oil-well drilling were the basis of a relatively large number of big fortunes. It must be remembered that, in the case of the last two at least, there was a vast outlay that yielded nothing but losses to the prospectors. The

government could easily have secured a much larger revenue from these resources without appreciably retarding their development and this would have favored a more equitable distribution of wealth.

A final criticism of the public land legislation rests on the fact that, from the very beginning down to the close of the nineteenth century, the whole trend was to make the public domain more and more easily accessible. If anything, the trend should have been in the reverse direction; certainly the reaction against this trend should have started much earlier. In the early period, when the difficulties and dangers of developing the frontier were great, there was more reason for making access to the land easy. But these difficulties and dangers steadily decreased as time went on and the nation grew powerful and its natural resources diminished. All of these developments demanded greater caution in the disposition of the public domain and a policy that would check the waste and corruption fostered by the desire to hasten development and by the spirit of private gain. The country was slow in awakening to the changing conditions and legislation fell far behind the needs of the time.

The Westward Movement of Population. In 1860 the line of frontier settlement in the Middle West had crossed the Missouri River and ran roughly along the 97th meridian except in northern Michigan, Wisconsin, Minnesota, and the reservations of Indian Territory. In the Far West there were the settlements in the Pacific coast states and in the intervening region the small scattered groups, mostly the product of mining activities. The Civil War checked westward migration though the movement to the mining regions continued relatively large. With the return of peace it was resumed with renewed vigor. The passage of the Homestead Law and a later amendment enabling soldiers in the Union army to count their term of service towards the residence requirement of the law attracted many to the West. At this period, too, the railroads were becoming the pioneers, pushing ahead of the line of settlement. In 1869 the completion of the Union and the Central Pacific railroads provided the first transcontinental line and in the early eighties the completion of other roads provided easy access to the northern and southern groups of Western states. This invasion of their happy hunting grounds aroused the Indians and led to a series of brief Indian wars. Control of the tribes was made easier by the new transport facilities and, after 1876, the outbreaks were only sporadic and had little effect in checking settlement.

Little scattered mining settlements continued to spring up as new discoveries were made. Though the output of gold fell below the high figures reached in the early fifties, it still remained over \$30 million a year. There was added during this period the rapidly increasing output of silver, which from 1873 to the end of the century always exceeded \$30 million a year in value in spite of the rapid decline in the price of this

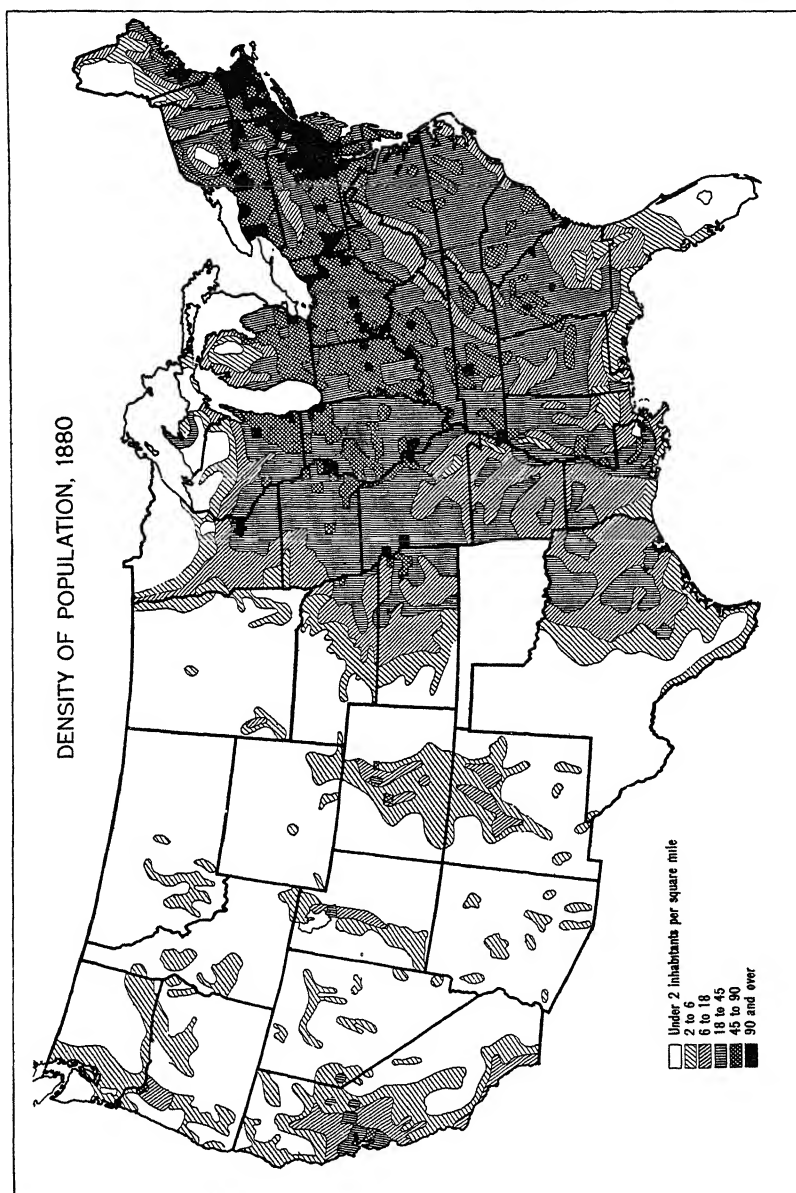
metal. About 1880, too, the copper mines began to be opened up, though by that time the conditions under which mining was carried on were becoming greatly altered. The earlier gold and silver mining settlements had a life that was unique in the history of the frontier and perhaps can best be appreciated by reading the stories of Bret Harte, or Mark Twain's "Roughing It." In many cases these earlier settlements vanished almost as rapidly as they arose and left scarcely a permanent trace of their existence. In recent times, with the opening up of less speculative minerals, the introduction of more scientific methods, and a larger scale of operations, the effects of mining development upon the growth of this region have been more permanent.

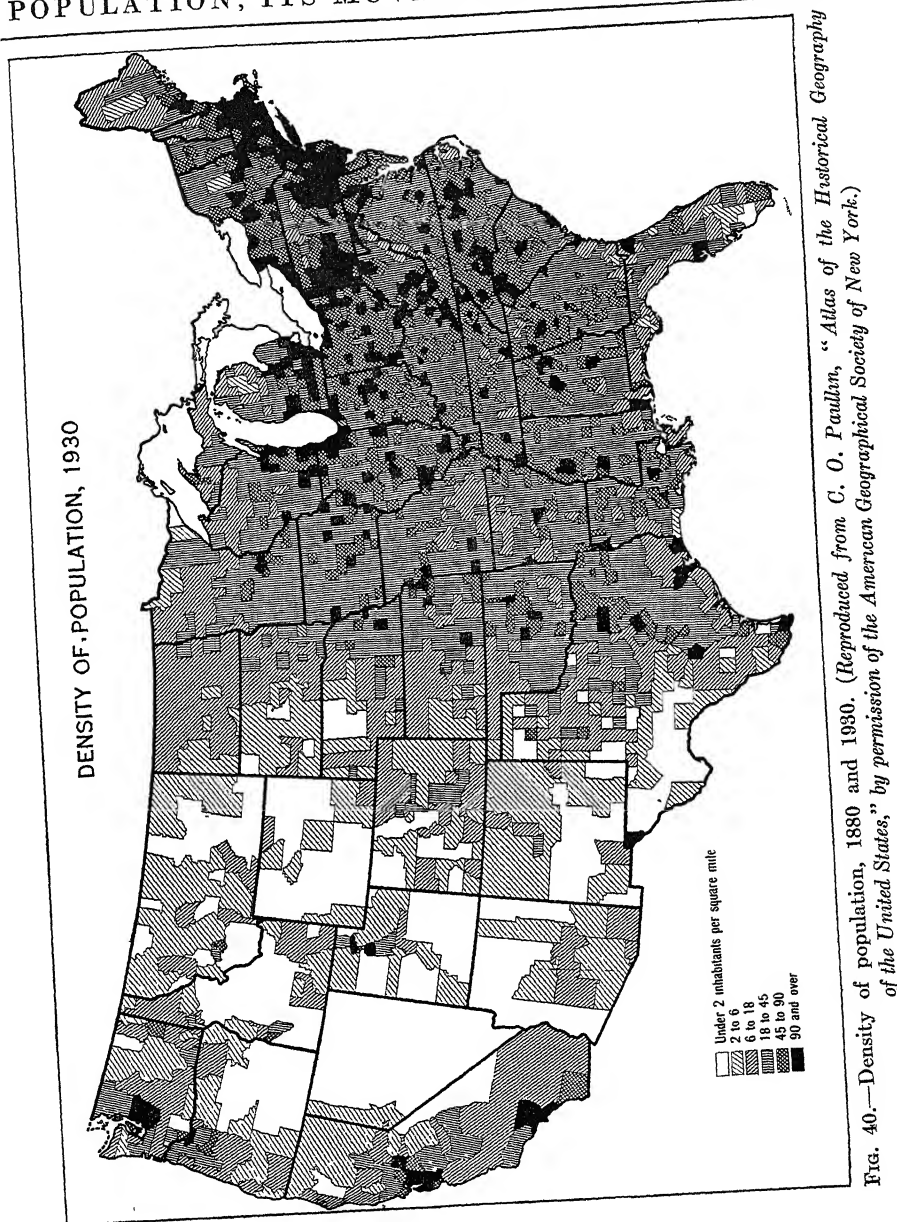
Though in 1870 the line of frontier settlement in the Middle West showed no great advance over that of 1860, the next two decades witnessed rapid shifts. Although the years of the middle seventies were marked by depression and falling prices for agricultural products, the movement to the West was unabated. During this decade the fertile valley of the Red River of the North was settled and the discovery of gold in the Black Hills of South Dakota brought a rush to that section. In Nebraska, Kansas, and Texas prairie settlers had pushed westward until they verged on the semiarid region. There was a marked expansion of the settled area in the mining region of Colorado and along the foothills of the Rocky Mountains from Wyoming southward to Santa Fe and near the upper waters of the Missouri in Montana. In the Far Northwest this decade witnessed the first rapid growth of the regions about Puget Sound, north-central Oregon, and southeastern Washington, and in California the expansion of the settled areas along the coast and in the valleys of the Sacramento and San Joaquin rivers.

The decade of the eighties brought an equally rapid movement to the West as times were more prosperous, railroads opened up new areas, and the realization spread that the supply of free and desirable land was fast disappearing. In fact the close of this decade is generally considered as marking the disappearance of the frontier and the end of the great westward movement. It was at this time that the homestead entries in Dakota, Nebraska, Kansas, and Colorado reached their high point. In Dakota the settled area was pushed westward to the Missouri River; in Kansas and Nebraska the advancing line of settlement was extended until it reached that of the settlements in Colorado. There was also a marked growth in the settled area between eastern Montana and the coast and a less rapid expansion in California.

The growing scarcity of desirable land was strikingly illustrated by the events attending the opening of some Indian reservations at the close of this decade. When a portion of the Sioux reservation in Dakota was opened in 1890, though it was midwinter, troops were required to hold

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back the homeseekers till the time of entry. When a section of Oklahoma was opened in April, 1889, thousands were waiting for the signal and a wild rush ensued. Some went by rail, some on horseback, some in the old pioneer wagons; whole town outfits, portable houses and all, were shipped in and by nightfall Guthrie had become a city of 7,000.

Such scenes afforded a striking contrast to those that had marked the earlier settlement of the Ohio Valley; they also indicated that the frontier had disappeared; the supply of free fertile land had nearly vanished. The great westward movement was coming to an end. That it was no longer of great significance is suggested by the fact that the increase of population in the states west of the Mississippi River in the three decades following 1890 was about 90 per cent as compared with an increase of 60 per cent in the region to the east. In the thirty years preceding 1890 the increase had been at a rate nearly four times that in the East. Finally, in the decades 1920-1940 the rate of growth in the two regions was almost the same. The westward movement, rapidly dwindling since 1890, had finally ceased.

The decade of the nineties proved a particularly trying one in the West. Agricultural products sold at abnormally low prices, and there was a series of unusual droughts which, combined with the fact that many had ventured to settle on semiarid land though unfamiliar with the proper methods for cultivating it, brought disaster to many. There was a distinct withdrawal of settlers from such sections in western Kansas or Nebraska and eastern Colorado at this time, and the growth of population in the West North Central group of states since 1890 has been slower than in any other group in the country. The emigration to the Canadian Northwest, which came chiefly from this group, first became appreciable at this time. Oklahoma, stimulated by the opening of the reservations and the development of the oil fields, grew more rapidly than any other state in the Union between 1890 and 1910, but the group of states that enjoyed the greatest rate of growth was that on the Pacific coast. There Washington led in rate of growth up to 1910, but the rapid development of fruit-growing and the rising popularity of the state as a resort placed California first in subsequent decades. The same factors explain the rapid growth of Florida in the East; this state with an increase of 28 per cent led all the others in the decade 1930-1940.

Of the total population of the country in 1860 a little over 14 per cent lived in the states west of the Mississippi River. By 1890 this had risen to nearly 27 per cent, but since then there has been only a moderate increase to around 34 per cent in 1930 and 37 per cent in 1940. A significant feature of the decade ending in 1940 was the loss of population in the tier of five states from Oklahoma north—chiefly due to drought in

the "dust bowl." The most rapid rate of growth as a group occurred in the Far Southwest.

Those who took part in this westward movement were mostly of native white stock. Few Negroes have gone west of Texas. As previously, the general tendency was to migrate along similar parallels of latitude, though there was more of a movement from Northern states to southern portions of the Far West than from Northern states toward the Far Northwest. The most important contribution made by immigrants was that of the Scandinavians who settled in Minnesota and neighboring states in large numbers. There were smaller groups from countries of central and eastern Europe scattered through most of the other states of this region. In recent decades the Pacific coast states have had a considerable immigration, largely from countries of southern Europe; but the immigrants from eastern Asia, though chiefly located there, have been relatively few in number. Still more recently the states bordering on Mexico have had some immigration from that country.

The Urban Movement of Population. Though the movement of population from rural districts to the large towns and cities has been marked from the very first, its effects have been in part counteracted by the migration to the unsettled rural regions of the West. As the westward movement lost most of its force after about 1890, the migration to the cities has since become the dominant feature in population movement.

In 1860 only about one-sixth of the population lived in places of 8,000 or more inhabitants; in 1930 about 49 per cent lived in such places. Taking the present census basis of places of 2,500 or more inhabitants as the dividing line between urban and rural population, we find that over one-half the population of 1930—56 per cent—was urban. At that date nearly an eighth of the population lived in the five cities having a million or more inhabitants each; nearly one-third lived in cities of 100,000 or more. How marked the urban movement became is suggested by the fact that between 1910 and 1930 the urban population increased over 63 per cent while the increase in the rural population was only 8 per cent. Between 1890 and 1930 the urban population increased 209 per cent and rural population only 32 per cent.

The proportion of the population living in urban centers varies greatly in different regions but three fairly distinct sections can be noted. The urban population is highest, about 73 per cent of the total, in the industrial section east of the Mississippi and north of the Ohio River and Maryland; it is lowest, about 34 per cent, in the South. In the Far West in the Rocky Mountain region, in spite of the sparse population, over 39 per cent of the total is urban; in the Pacific coast states, the figure rises to over 67 per cent. These figures are most suggestive of the variations in

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economic and social conditions under which the bulk of the people in these regions must live.

The Growth of the Large Cities. The chart on this page shows the growth in population since 1860 of the largest cities of today. In many cases this growth is in part a product of the expansion of the city's area. New York is still far ahead, thanks to its position as the leading commercial, manufacturing, and financial center. A marked feature of this period has been the growth of cities situated along the shores of the Great Lakes, for the most part a product of the development of manu-

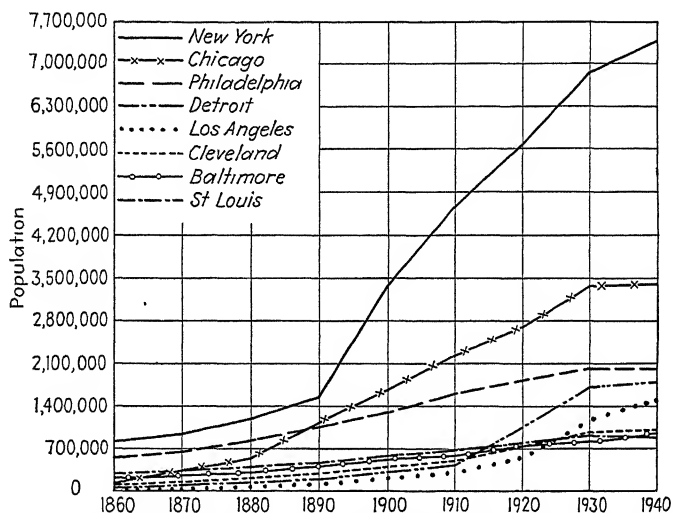


FIG. 41.—Growth of population since 1860 of the eight largest cities of 1940.

facturing. The case of Chicago, which quickly outstripped its Middle Western rivals and by 1890 had become the second largest city of the country, is the most prominent, though commercial and financial activities played a more important part in that growth. The recent sudden advance of Detroit is mainly a product of the automobile industry, also chiefly responsible for the rapid rise of many smaller cities in that region. Philadelphia, though dropping to third place, has enjoyed a steady growth primarily based on manufacturing. The continued though slow expansion of Boston and Baltimore has been founded on both manufacturing and commerce, their lack of waterways into the interior being less of an obstacle to commercial expansion today than before 1860, thanks to the development of the railroads. New Orleans and Cincinnati, the two largest cities of the West in 1860, have had their growth checked by this decline in importance of water routes, together with the slower growth of population and the rise of rival commercial centers in their tributary territory.

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St. Louis, though also suffering from the decline of waterways, has benefited from the growth of population to the west and a considerable development of manufacturing.

The growth of the larger cities in the region beyond the Mississippi River has been influenced by the opportunities for the expansion of trade and commerce; those on the Pacific coast, by the growth of trade with the Orient as well as the domestic distributing business; and those in the interior points, by the latter. With a few exceptions, notably Minneapolis, manufacturing has played a rather minor role. Except for those lines engaged in working up local raw materials, the growth of manufacturing has rather followed commercial growth. Mining development explains the growth of only a few smaller cities. The recent rapid rise of Los Angeles, now the largest city west of Chicago, though partly owing to extensive annexations, is unusual in that it has been chiefly based upon the popularity of that locality as a climatic resort, but this growth is providing a basis for an increasing volume of trade and manufacturing.

Though the factors that shape the fate of cities are innumerable, it is obvious that during this period the existence of conditions that favored industrial activities was the most important in the growth of American cities as a whole; those favoring trade and commerce, though still very important, were less so than before 1860. Financial activities, though a minor factor, were also more important relatively; just how far they can be considered as independent of industry and trade is difficult to determine.

The persistence of the urban movement and its dominance in recent years, now that the westward movement has ceased, are based on certain economic advantages. Fundamentally the large city may be said to provide one of the greatest illustrations of the advantages of specialization and division of labor based upon large-scale production and a large market. Moreover, like other instances of specialization, it is only made possible by the development of transportation facilities, both local and national. Without the modern transport equipment for bringing in food, raw materials, and other supplies and for carrying out the city's products, it could not exist.

The really outstanding advantage of the great city rests on the enormous purchasing power it possesses, and upon which the vast local market rests. This is notably important in the case of those goods and services that have to be used in the locality where they are produced. A concern engaged in mass production often does not need to be located in a very large city if its product is readily transportable. In such a case both the large city dweller and the small town dweller can obtain the advantages of mass production in the resulting lowered price. It is through the large number and variety of goods and services produced in his locality and

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the large scale of the local marketing process that the big city dweller especially benefits.

Many of what are popularly called the advantages of city life belong in this class. Such things as the opera, the best concerts, or great art museums, to mention but a few, cannot be provided in small communities as they can in large cities, and the larger the city the lower the cost per unit of service. Similarly with the goods and services provided by the local government, the large concentration of wealth that can be drawn upon by taxation and the lower unit cost of providing these on a large scale make it possible for the big city to provide more and better things than could be supplied by smaller places. The attractions of the city thus have a sound economic foundation.

Yet the additional gains to be obtained from greater and greater size will tend to diminish at some point, just as certain disadvantages may increase. Thus the rate of growth of the very largest cities tends to become less rapid than in those of moderate size. We must recognize, however, that the developments that have made possible the great modern city, despite certain accompanying evils, have substantially added to the standard of living.

CHAPTER XXX

TRANSPORTATION AND COMMUNICATION SINCE 1860

Introduction. The outstanding feature in the history of transportation after 1860 was the dominant position attained by the railroads. The period during which the more widespread among the revolutionary effects following the introduction of railroads in this country were most felt may be said to fall roughly between the years 1850 and 1885. Until about 1850, or perhaps as late as 1860, the railroads were mainly feeders to the waterways. It was not until the fifties that anything like a real railroad system extended beyond the states bordering on the Atlantic coast. Between 1860 and 1885 the transcontinental lines were pushed through to the Pacific coast, the main outlines of the country's railroad net were completed, the introduction of many technological improvements facilitated through traffic and lowered costs, short roads were consolidated into great systems, and a rapid reduction in rates took place. Though progress did not stop with 1885 its effects thereafter were much less revolutionary in character. With this advance in rail transportation came a decline in the importance of most of the inland waterways. In the twentieth century came the rapid spread of motor vehicles and extensive improvement and construction of roads to facilitate their use. Though primarily used for local or regional transport, this new vehicle was able to compete in many services with the railroads. More recently the airplane has provided the speediest transport known.

The period after 1860 also brought marked changes in the development of communication facilities; the most remarkable, such as the telephone, the wireless, and the radio, came in the latter portion of the period. Together, the improvements in transportation and communication have served to widen markets, promote specialization, stimulate trade, and build up a national economy. Moreover, as these improvements were adopted by other nations, the resulting gains were spread around the earth and promoted a more nearly world-wide economy. By 1938, man had encircled the globe in less than four days by airplane, a telegram had been sent around in less than five minutes, and a radio broadcast covering most of the world was possible.

Technological Advance in Railroads. The introduction of cheap steel brought many changes in the railroads, notable among them being the

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substitution of steel for iron rails and the use of steel bridges. The first steel rails were laid in 1863 but it was not until the rapid drop in their price during the seventies that extensive use was made of them; probably not over a third of the mileage was of steel by 1880. As the rails improved in quality and increased in weight much heavier locomotives and trains could be run. The same result followed the introduction of steel bridges: longer distances could be spanned. Still later the rolling stock began to be constructed of steel. Coal-burning locomotives were first extensively used after the Civil War; more recently those using oil and electricity have been introduced. The development of the locomotive since 1860 makes the modern product a giant as compared with that of the earlier date. Another marked gain came with the general adoption of the standard gauge track, accomplished by 1886, which enabled the rolling stock to move freely from road to road throughout the country. By 1875 passenger trains were generally equipped with the air brake and better provision was made for signaling train movements. Through sleeping-car service was widespread by 1869; the refrigerator car was then introduced and fast freight lines soon became numerous. Steady improvements along many lines have continued down to date, some of the most noticeable gains being made in the decade following 1920 during which it has been claimed the efficiency of the railroads was increased around 25 per cent. The next decade witnessed the introduction of the speed and comforts of the streamlined air-conditioned passenger train. More efficient operation combined with some decline in traffic has since enabled the railroads to reduce the number of their employees from the all-time peak of over 2 million in 1920 to about half that number today.

The Financing of Railroad Construction. The construction of the transcontinental railroads involved an enormous outlay. The trans-Mississippi region was so sparsely settled that the financial risks of such an undertaking were greater than private enterprise was then prepared to assume without assistance. The desire to hasten the construction of these roads led to the second period of land grants beginning in 1862, described in Chap. XXIX. In the case of the Union and the Central Pacific railroads and certain branches, the land grant was also supplemented by a government loan, varying from \$16,000 to \$48,000 per mile of track according to the character of the region traversed, and totaling some \$65 million. The actual building of the road in the case of both of these railroads was undertaken by private construction companies under terms that proved very profitable to them, if not to the railroads. The fact that some members of Congress were found to be interested in the Credit Mobilier, which built the Union Pacific, led to a national scandal. As the prospect of profits increased, the building of each road was rapidly pushed to earn as much of the grant as possible and the two roads were finally

joined at Ogden, Utah, in 1869, accompanied by a national celebration to mark the passing of another milestone in the country's development. But the reaction against the railroads which was then setting in put a stop to all Federal grants after 1872. Many years later, in 1914, the need for a railroad in Alaska led the government itself to undertake its construction; it was completed in 1923 but has not proved a financial success.

However, there was still another form of public financial assistance that was extended to the railroads. In spite of unfortunate previous experiences, many states continued to grant them financial aid. During the period of reconstruction this practice became common among the Southern states, usually taking the form of a bond issue or the guarantee of the railroad's bonds. Some states gave land that had come into their possession, such as swamp land, to the railroads. Texas, where the public land had been retained by the state, granted over 32 million acres for improvements, mostly to the railroads. Just as before 1860 innumerable smaller political units—counties, cities, and towns—eager to secure a railroad bonded themselves and turned the proceeds over to the roads, sometimes as a gift, sometimes in exchange for their securities. This was particularly common at this period in the prairie region of the Middle West, at least where such action was not prohibited by the state, and the practice continued, though declining in popularity, for many years. Numerous such communities became heavily burdened with the debts so incurred and more and more states took action to prohibit this practice. After about 1890 it became unimportant.

As the country grew in wealth and accumulated capital and increasing settlement lessened the risks of railroad pioneering, the problem of financing became somewhat easier, in spite of the enormous sums being used for new construction up to about 1893. The end of the war and the rapid development of the country renewed and increased the confidence of foreign investors and much of the large inflow of capital from abroad during this period was invested in railroad securities. The first transcontinental line to be carried through with practically no land grant, the Great Northern built under the leadership of James J. Hill, was completed in 1893.

The financial policy of the railroads undergoing construction at this time was not of the wisest, for it was marked by an increasing tendency to rely very largely on the sale of bonds rather than stocks to secure the necessary cash. The stock was disposed of for a small sum or given as a bonus with the bonds. The heavy fixed charge in the form of bond interest which this policy incurred often led to financial disaster for the railroad and heavy losses to the investors. Unfortunately, too, not a few railroads fell under the control of speculators through whose unscrupulous manipulation they were saddled with financial burdens from which

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some suffer to this day. Such scandalous actions as attended the fight over the Erie just after the Civil War, to mention but one of the most notorious of the cases, made the necessity for stricter public control only too obvious. However, it was not until the twentieth century that much was accomplished along this line. The domination of many state legislatures by railway influence was a common obstructing force.

Railroad Construction. The annual addition to the railroad mileage of the country during this period is shown by the chart on this page. Up to about 1914 this construction fluctuated roughly with the periods of

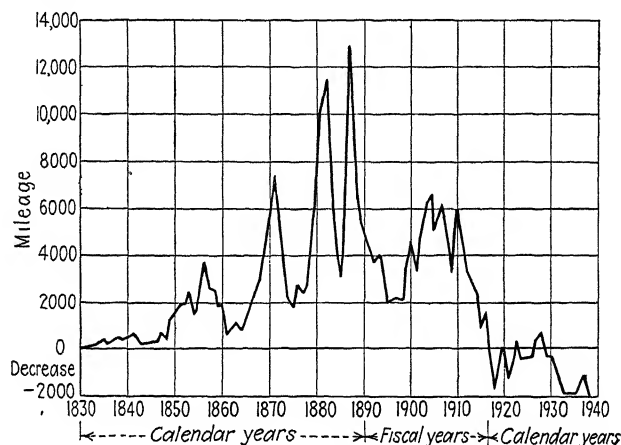


FIG. 42.—Annual increase of railroad mileage in operation in the United States, 1831–1938.

boom and depression of the business cycle. Stimulated by the land grants and other aid, railroad construction was resumed after the Civil War on a larger scale than ever before. This continued until the outbreak of the panic in 1873, but during these few years the total mileage of the country had been doubled. The completion of the first transcontinental in 1869 was the most important event of the time; except for that road there was practically no building in the region west of the Missouri River. The most extensive construction took place in the grain-growing states of the Northwest but many gaps were filled in in the older sections of the country.

Active building was not again resumed until about 1878 when there began a period of construction lasting until after 1890 which is unequalled in the history of this or any other country. In 1878 there were less than 82,000 miles of railroad in operation; by 1893 this figure had been doubled. Even in 1920 no country in the world had half the mileage that was built in the United States during this brief period. Much the most important construction during these years was in the Far West. The period is notable as opening up most of this region by the completion of the Northern Pacific in 1883, the junction of the Southern Pacific with the Texas and

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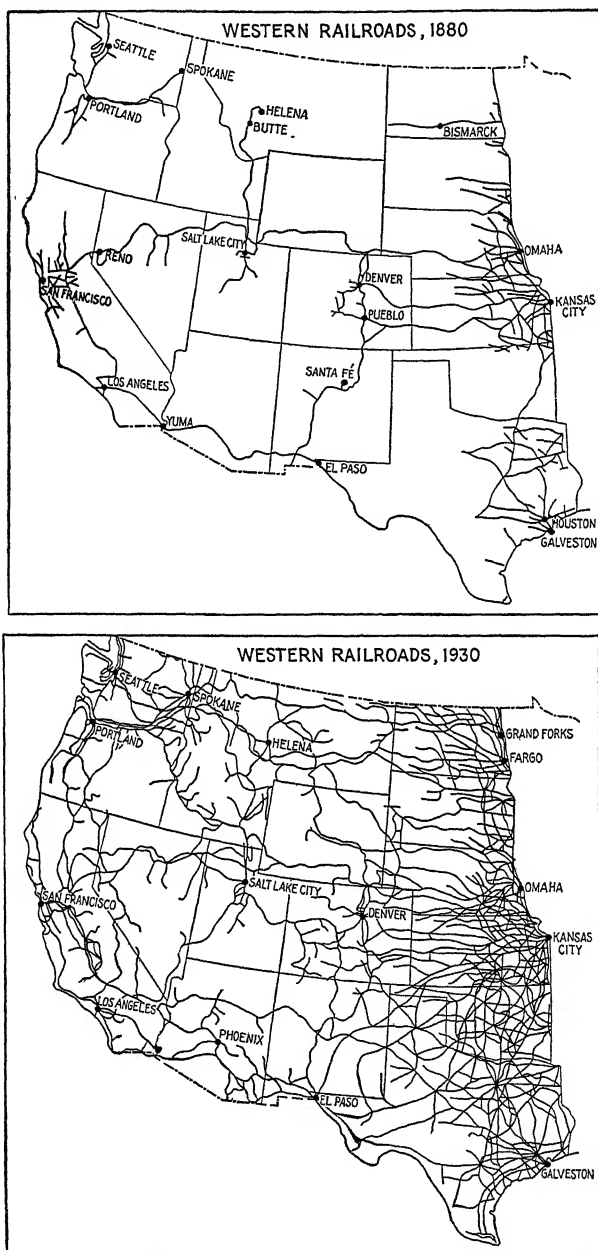


FIG. 43.—The western railroads in 1880 and 1930. (Reproduced from C. O. Paullin, "Atlas of the Historical Geography of the United States," by permission of the American Geographical Society of New York.)

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Pacific and the Santa Fe in 1881, the extension of the latter to San Diego in 1885, the connection of Ogden and Portland in 1884, and the completion of the Great Northern in 1893. Other roads were rapidly pushed westward into the region between the Mississippi and the Rocky Mountains and the process of filling in gaps in the region to the east still went on.

Although the trans-Mississippi region was the chief gainer from the railroad construction of this period, 1860–1890, not only in absolute mileage but even more from its economic importance, since there were barely 2,000 miles of railroad in the states of this section in 1860 and over 72,000 in 1890, it should be noted that the addition to the mileage in the states to the east of the Mississippi was almost as great—over 62,000 miles. This construction, which was double the total mileage of the section in 1860, was especially important for the Southern states which at this period first secured a fairly adequate system of through lines. In the Northern states it meant chiefly the extension of railroads to less populous sections or paralleling systems in existence. By 1890 the railroad mileage of the United States was more than five times that in 1860 and it could be said that the main outlines of the country's railroad system had been completed.

The prolonged depression following the panic of 1893 checked construction, but after 1898 greater activity developed and railroad building continued at a good pace until the outbreak of the first World War. By 1916, when the peak was reached, practically another 100,000 miles of railroad had been added to the mileage of 1890. This brought the total up to 254,000 miles or more than a third of the mileage in the world. The construction during this period was partly to provide new through lines for the growing volume of long-distance traffic and partly to fill in gaps in the existing system, especially in the Far West where considerable sections still lacked railroads. The war put an end to construction for the time being and since then the difficulties faced by the railroads have led to some decline in trackage. Thus the period of extensive construction appears to have ended with the outbreak of the war.

The Tendency toward Consolidation. The railroad industry is one that possesses in a marked degree characteristics typical of modern capitalistic industry: notably, decreasing costs leading to large-scale production, keen competition, and a tendency toward monopoly. It was through this industry that the country was first brought face to face with the problems that arise under such conditions, as the developments during this period will show. Among them was a marked tendency toward consolidation and the development of great railroad systems.

Before 1860 most of the railroads were relatively short and traffic moving any appreciable distance had to pass over several independent

lines. It was obviously advantageous to unite under one control the companies over whose lines any considerable volume of long-distance traffic was moving and a beginning in this direction had been made in the fifties. After 1860 many more of the roads being built were planned for long-distance traffic and trunk lines. Also, much of the new construction was carried on under the control of existing lines, even where a separate company was organized to operate the road. Thus the conditions under which the new mileage was constructed tended to build up larger systems than before.

In addition to this, the older and stronger roads were actively reaching out and getting control over others. Shorter branch lines were sought because they served as feeders to the traffic of the main line; roads connecting with the main line were sought in order to reach important traffic centers and build up a greater long-distance traffic; in other cases the desire to check potential competition or to limit the existing competition of other roads was the primary motive in such extension of control. The methods most commonly used for this purpose were a lease, most frequent in the case of shorter roads or branch lines, and the purchase of a controlling interest in the stock. Often the establishment of closely connected financial interests proved sufficient to secure the desired results.

The most important systems developed during the early portion of this period were the trunk lines between North Atlantic ports and Chicago or St. Louis. By 1873 five railroads had built up systems that gave them through lines from the coast to Chicago. This led to extremely keen competition between these lines and a long series of rate wars. To check this competition, which threatened to become ruinous—in an extreme case one railroad actually paid to carry oil—the railroads resorted to pooling agreements to fix rates. But these agreements were constantly breaking down and in 1887 were prohibited by Congress. The legislative policy designed to enforce competition only added to the incentives favoring consolidation and hastened the movement. Most of the mileage in New England came under the control of two companies; numerous short roads in the South were consolidated into a few great systems. In the Far West under the aggressive action of E. H. Harriman, who resuscitated the Union Pacific, that road secured control of the Southern Pacific; under J. J. Hill the Great Northern, the Northern Pacific, and the Burlington were united under common interests. Desiring to establish connections with the Pacific, the St. Paul and the Gould systems each built new lines extending to the coast; the latter through purchases and construction also sought to reach the Atlantic, but the effort ended in failure. Although the extent of control of the different systems fluctuated and legislative opposition effected some disintegration, the greater portion of the mileage

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of the country had been brought into one or another of these large systems by about 1906.

After the first World War, however, a distinct modification in the attitude of the government toward consolidation took place and was reflected in a provision of the Transportation Act of 1920 which directed the Interstate Commerce Commission to draw up a plan for regional consolidation of systems. Though primarily designed to protect the public by a carefully coordinated scheme which would preserve competition "as fully as possible," it was also intended to provide support for the weak roads to be combined with the stronger ones. The final plan announced by the commission in 1929, but since modified, involved the creation of some seventeen major systems. As there was considerable opposition to details of the plan among some of the railroads and consolidation was voluntary, the commission having only the power to disapprove acquisition of control by certain methods whereas others were left open until eliminated in 1933, not much progress has been made in carrying out the plan. That the development of large systems has resulted in economies and improvement in service is undoubted, but the power thus secured has necessitated more effective public control.

Railroad Regulation and Control. Until about 1870 the general attitude of the public had been that there could not be too many railroads and anything that could be done to hasten construction was desirable. Consequently there had been little effort at effective regulation. The earlier charters had generally imposed certain restrictions, which were of slight effect; later the eagerness to secure railroads, particularly in the West, tended to reduce these restrictions to a minimum. The causes that led, about 1870, to the beginning of the first really effective regulation are various. The growing keenness of competition and the struggle for traffic gave rise to the general practice of giving rebates or other favors to large shippers, which of course put small shippers at a disadvantage. Also, localities that happened to have competing railroads were granted low rates whereas places that did not possess this advantage found their rates maintained at a relatively high level. This naturally aroused much opposition.

Another factor creating hostility to the railroads arose from the difficulties of the Western farmer at this period. The West had gone heavily into debt to secure railroads and the price of Western products was falling. The farmer, realizing that the freight rates that these products had to pay to get to market reduced the price that he secured for them, began to demand lower rates and naturally was particularly incensed in cases where the absence of competition resulted in rates that seemed discriminatory. It is significant that this phenomenon of a demand for lower railroad rates in the West has always been most marked at periods

when the farmers of that section were suffering from low prices for their products. The abuses that crept into railroad operation and management have been in part responsible for the demand for regulation; but a reduction in rates has been one of the various remedies for their troubles to which the farmers of the West have repeatedly turned for relief, without much reference to the fundamental causes of their difficulties.

The first action was taken by the states. In 1869 Massachusetts created a railroad commission, whose powers were largely limited to gathering information and advising the legislature as to needed action. Much more vigorous measures were adopted by a group of Middle Western states in what is commonly known as the Granger Legislation. Illinois led the way in 1871 by creating a railroad and warehouse commission with power to fix maximum rates and fares and to prohibit discriminations. Other states, including some in the South, took similar action; but in a few cases the resulting regulations proved so severe as to stop railroad building and cause repeal of the laws. An important decision of the Supreme Court in 1877 upheld the right of the states to fix reasonable intrastate rates, though subsequent decisions limited this power to rates that did not affect interstate commerce.

At the same time there commenced a long struggle to secure action by the Federal government which finally culminated in the passage of the Interstate Commerce Act of 1887, the law that furnished the foundation upon which the present Federal control has been built up. This law, which of course applied only to interstate commerce, prohibited pooling agreements, unreasonable rates, and discriminations as between individuals, different kinds of commodities, and different places. The "long-and short-haul clause" prohibited lower rates for like commodities carried a long distance than for those carried a shorter distance over the same line, in the same direction, and under similar circumstances; however, under certain conditions this prohibition could be suspended. All rates were required to be published and changes could not be made without prior notice. To help administer the provisions of the law the Interstate Commerce Commission was established with powers of investigation and the right to issue orders, but these orders were only enforceable through appeal to the courts. For a decade or more the effectiveness of this legislation was considerably lessened by a series of court decisions limiting the powers of the commission.

It was partly to counteract these decisions and partly to increase the extent of control exercised that a series of amendments followed. The Elkins Act of 1903 was concerned mainly with changes to facilitate enforcement of the law. The Hepburn Act of 1906 made the interstate business of express companies, sleeping-car companies, private car lines, and pipe lines, together with various subsidiary services of the railroads,

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subject to the commission; it allowed the commission, where existing rates were found unlawful, to determine and prescribe just and reasonable maximum rates; it stopped most free passes; it prohibited railroads from carrying commodities other than lumber which they owned but did not intend to use, a provision known as the "commodities clause" and aimed primarily at the control exercised by anthracite coal railroads. Also, the commission's orders were made binding without court action unless set aside by a court.

In 1910 under the Mann-Elkins Act telegraph, telephone, and cable companies were brought under the commission's control; the long- and short-haul clause, which had been made practically ineffective by a court decision in 1897, was strengthened and a commerce court created; when this court rendered certain decisions disliked by Congress, it was shortly abolished. Under the Panama Canal Act of 1912 the commission was granted certain powers designed to prevent the railroads from stifling competition by water carriers. With the aid of these amendments the commission's work was made more effective. The evil of personal favoritism appears to have been practically eliminated. Whereas the question what constitutes unreasonable discrimination as between places or commodities is often most difficult to decide, obviously unfair cases have been remedied and an unreasonably high general level of rates has been prevented, though adjustments both down and up have been too slow. The problems that the commission has faced are no less delicate and complicated than they are important. Although, under such circumstances, it was not to be expected that its work would be free from criticism, it has amply justified the commission's existence. Today few would be found prepared to deny that some such form of administrative control at the least is necessary.

The period of the first World War created problems that eventually led to the government's taking over the railroads. In 1916, before we entered the war, the Adamson Eight Hour Act provided for Federal control over the hours of railroad labor. When the roads were finally turned back to private control under the Esch-Cummins Transportation Act of 1920, that law included provisions that involved marked changes in general policy. The clause that permitted pooling agreements subject to the supervision of the commission was the outstanding change. This recognized that the provisions of the act of 1887 that tried to compel competition by prohibiting pooling and at the same time prohibited discriminations, which were chiefly a product of competition, were inconsistent. Another modification in policy was reflected in a provision looking forward to the voluntary consolidation of the railroads into groups of competing systems under plans to be worked out and approved by the commission. The power of the commission over rates was increased by

giving it control of the division of joint rates and the right to fix specific as well as minimum or maximum rates in place of those found unlawful. Another provision was that the general level of rates was to be adjusted so as to allow the railroads as a whole to earn a fair return on the value of their property, the rate for the first two years to be between $5\frac{1}{2}$ and 6 per cent, as determined by the commission. In case of a return in excess of 6 per cent, half of it was to go to the railroad and half to the government for a fund which could be lent to the railroads. This "recapture clause" was repealed in 1933.

Control over the issue of railroad securities was now vested in the commission, with the idea of preventing overcapitalization and other abuses; the power to require the joint use of terminals was also given to it. To aid in the settlement of disputes between the railroads and their employees, Railroad Boards of Labor Adjustment and the Railroad Labor Board were created; in 1926, having proved ineffective, they were abolished by the Railway Labor Act which provided more varied means for settling such disputes. To prevent unnecessary new construction, the act of 1920 required that new trackage be approved by the commission as well as the abandonment of the old. That body was also given somewhat limited powers to curb the acquisition of control over other lines, and interlocking directorates were prohibited.

The commission's preliminary estimate of the value of railroad property used for transportation purposes was put at \$19 billion in 1920 and at nearly \$24 billion in 1930 (figures, it may be noted, that were somewhat below the capitalization of the railroads); but it was found that, except in the two most prosperous years, the railroads never earned the $5\frac{3}{4}$ per cent return that the commission had settled upon as fair. When, on top of the loss of traffic due to motor vehicle competition, there was piled that due to the severe depression starting in 1929, while various operating costs rose, the financial situation of the railroads became acute. Once more, as during the war, the railroads found themselves caught between a heavy loss in revenue and the inability, under the slow and cumbersome process of regulation, to adjust rates, service, and many items of cost to meet the situation. In 1932 roads controlling nearly three-quarters of the mileage of the country failed to earn their fixed charges and were saved from bankruptcy only by the lenience of their creditors or by loans, mostly advanced by the government. In part to meet the emergency and in part to remedy defects in the existing legislation, new laws were passed in 1933-1934.

The Relief of Debtors Act, amending the bankruptcy law of 1898, included provisions applicable to railroads that were designed to secure a more equitable basis for adjusting the different interests in the process of reorganization and also to give the commission a chance to exercise

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some influence in the formulation of the plan. In 1934 another change in the method of settling labor disputes was made through the creation of the National Railroad Adjustment Board; company unions and yellow dog contracts were prohibited and provision was made for a pension system.

More important and comprehensive in scope was the Emergency Transportation Act of 1933. The temporary clauses of this law created the Coordinator of Transportation with three regional committees of coordination. The duties of the officials were to make investigations and recommendations and to issue orders, subject to review by the commission and courts, designed to check needless expense or duplication of effort, to further financial reorganization, and to promote improvement of the conditions surrounding transportation. To protect railway workers it was provided that the number employed was not to be reduced as a result of this law; this considerably limited the scope of potential reductions in operating costs. The permanent provisions of the act amended the existing law to extend the power of the commission over all methods of combining railroads so as to ensure greater agreement with the commission's plans for consolidating the roads and established a more flexible rule of rate making, omitting reference to the fair return and value required by the act of 1920. This change was accompanied by the retroactive repeal of the recapture clause of that act.

Railroad Rates and Traffic. Shortly after 1870 there was a rapid reduction in railroad rates. Immediately, this was chiefly owing to the keen competition among the developing systems, but improvements in transportation methods and the lowered cost per unit in handling a greater volume of traffic contributed to the result. Between 1873 and 1884 the rate for wheat carried by rail from Chicago to New York fell from 33 to 13 cents a bushel. This decline was considerably greater than the general fall in rates, owing not only to the competition among the trunk lines but to that of the water route as well. There was no such rapid decline in this rate for wheat thereafter, for the lowest figure subsequently reached was a little more than 9 cents just before the war; since then the rate has about doubled.

Though no general figures are available, it appears fairly certain that the decade following 1873 witnessed the most rapid drop in freight rates. Beginning in 1890 general figures are obtainable; in that year the average rate received by the railroads for carrying a ton of goods one mile was a little over 0.9 cent. Thereafter there was a slow but steady decline to a trifle over 0.7 cent in 1916. After 1896, although the general rise in wages and prices steadily increased the expenses of the railroads, there was no corresponding increase in rates. Although the increased volume of traffic partly offset this, many roads found themselves seriously pinched finan-

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cially and in a position where needed betterments and additions could not be made. This difficulty was greatly increased by the rapid rise in operating costs during the war, for the advance in rates was much less rapid, and only the government guarantee saved many roads from bankruptcy. Up to 1930 the financial position of the roads considerably improved but the general level of rates today is distinctly higher than before the war, the average per ton-mile since 1921 being about 1 cent. Passenger rates which had averaged about 2 cents a mile after 1890 rose to around 3 cents after the war but have since fallen to less than 2 cents.

The enormous growth of railroad traffic during this period was primarily a product of the extension of the railroads and the general development of the country. The reduction in the cost of transportation

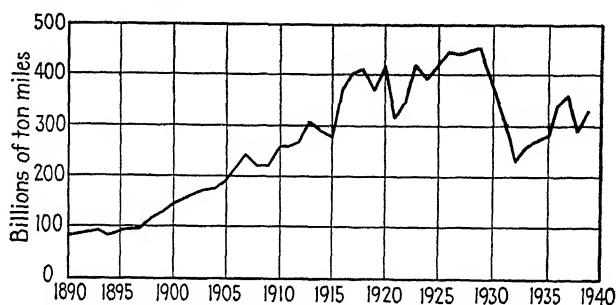


FIG. 44.—Ton-miles of revenue freight carried by railroads since 1890.

stimulated traffic and the greater volume of traffic, under the law of decreasing costs, made still lower rates possible so that the effects were cumulative. As rates declined the railroads were also able to attract a steadily increasing proportion of the traffic that had theretofore sought other transportation facilities, especially the water routes. The success of the railroads in drawing traffic from the canals and the rivers was one of the significant traffic developments of the period and will be described shortly. The first complete figures for railroad traffic are for the year 1890 when over 77 billion ton-miles of freight and nearly 12 billion passenger-miles were recorded. Thirty years later the passenger traffic had nearly quadrupled and the freight traffic more than quintupled. The latter reached its peak of over 450 billion in 1929 and the former its peak of over 47 billion in 1920. Since these dates the severe competition of motor vehicle transport combined with the effects of the depression have reduced these figures by a third or more. Until the depression, freight traffic commonly yielded about three-fourths of the railroad's operating revenue and passenger traffic around one-sixth. Of the freight tonnage over one-half was made up of mineral products, chiefly coal, and around one-fifth of manufactures and miscellaneous products; agriculture contributed about one-eighth.

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In addition to the great reduction in the average of railroad rates that took place down to the outbreak of the war, the general rate-making policy that prevailed was also extremely important in its reactions upon the economic development of different localities and regions. The fact that a really adequate analysis of the effects of the extremely complicated rate system is almost impossible is perhaps responsible for the rather general neglect of the problem, but it is at least possible to point out a few of the tendencies that would follow from the policies that prevailed.

Down to the act of 1920 the underlying policy in legislation was to compel competition and, despite the long-continued efforts of the roads to check competition, it can be said that their actual rate-making policy was essentially competitive in character. Every railroad sought to develop new traffic along its own lines and to divert to its lines traffic carried by others. The resulting practice of charging what the traffic would bear, although it might lead to high rates where there was little potential or active competition, more often led to cutting rates, frequently almost to direct costs or even below them, in the struggle to get more traffic. This meant that producers all over the country had their market area expanded and hence faced keener competition from a larger number of rival producers. In industries where a marked tendency toward decreasing costs prevailed, this also led to a larger scale of production and increased concentration of control. In a similar way certain localities enjoying unusual competition in rail or water transport obtained especially low rates which tended to increase the concentration of production and trade in those localities—the great seaports and lake ports are conspicuous examples but any railroad center will illustrate the point. The effects of this competitive policy were also extended to the foreign trade of the country, both export and import.

On the other hand certain rate-making policies tended to further the dispersion of production or trade. Thus the system of differentials on east-bound traffic from the Middle West, allowing the less favorably situated trunk lines somewhat lower rates, enabled them and the ports they served to secure more traffic than would otherwise have been the case. The system of blanket rates—charging the same rate to any point in a large section of the country—had a dispersing effect in the receiving section. Generally speaking, however, the dominant rate-making policies, by tending to modify the effects of pure distance in the determination of rates, brought about an intensification of competition, a lowering of average costs of transportation, and an increased division of labor and concentration of control.

The significance of the volume of work accomplished by the railroads of the country is seldom appreciated. It is well worth while to stop for a moment and consider what this modern mechanism for transportation

actually accomplishes in aiding the nation to satisfy its economic wants. One method of measuring the railroads' achievement is to see what would be required to do this work by pure labor power. If we assume that a man could carry 100 pounds 20 miles a day, it would have taken every man in the country between twenty and sixty-four years of age, working 300 days a year over forty-six years, to carry the revenue-paying freight, to say nothing of the passengers, that the railroads carried in the year 1920.

Another comparison suggests the increased efficiency in supplying our economic wants made possible by the railroad. The day's task assumed above is the equivalent of transporting a ton of goods one mile. In 1920 the railroads performed that task for an average of about 1 cent; if pure labor had been employed, it would have cost 200 or 300 times as much. This suggests what a laborsaving device modern society possesses in the railroad. In performing this task in 1920 the railroads employed around 2 million people and about \$20 billion of capital, or approximately \$10,000 per employee. This labor saving was made possible by the mechanism of the road designed to use the resources and free forces of nature under man's organization and control. This is only one of the innumerable illustrations of the more effective methods of cooperation between man and his environment and between man and man that brought such great progress in the material well-being of mankind during the nineteenth century.

The Inland Waterways and Their Traffic. As previously suggested, the outstanding feature in the history of canal and river traffic during this period was the great decline in its relative importance. There was one striking exception to this general tendency—the Soo Canal. The development of the Northwest, but especially the opening up of the iron-ore mines of the Lake Superior region, chiefly explain the great growth in the traffic of this canal, which in volume has become several times greater than that of the Suez Canal. The bulk of the traffic is eastbound iron ore, and there are considerable shipments of wheat and flour. The westbound traffic is much smaller, coal being the chief item. The traffic passing through this canal was responsible for the greater portion of the increase in the traffic on the Great Lakes.

A few other short ship canals also showed an increase in traffic but the great majority of canals built before 1850, most of them state- or corporation-owned, experienced a heavy loss. The Erie system, much the most important and successful of the early canals, reached the high point in volume of traffic during the early seventies; by 1917 its traffic was only about one-fifth of what it had been at the former period despite the abolition of tolls in 1883. The completion of the enlargement of the canal has brought a large increase since then. Nearly all the other state-owned canals have suffered a much heavier loss in traffic and many have been

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abandoned. The movement to abandon canals had started even before the Civil War and afterward proceeded rapidly up to about 1880, when nearly 2,000 miles had been given up; by 1916 this figure had risen to over 3,500 miles or about three-quarters of the total canal mileage of the country. (See the map on page 338.)

The great riverways also lost traffic, though at a less rapid rate. That on the upper Mississippi dwindled to an insignificant figure; even on the portion of that river below its junction with the Ohio, the railroads, particularly after about 1880, were increasingly successful in securing freight that had previously gone by river. At present coal carried downstream in barges, mostly coming from the region about Pittsburgh, makes up the only important item of traffic on this waterway; it is this traffic that has put the Ohio in the lead among the traffic-bearing rivers of the country and made Pittsburgh the most important inland river port. In a few minor instances improvements in the riverways have brought some increase in traffic in recent years, but the majority of cases indicate a decline in importance. It has been estimated that in 1932 the total traffic on inland waterways was less than 14 per cent of that carried by rail; if the Great Lakes traffic is excluded from this, it was only 3.36 per cent. This loss of traffic by most waterways has taken place in spite of the fact that the cost of constructing and maintaining them has been borne almost entirely by the public so that shipping charges were practically free from this overhead burden of expense and to that extent were subsidized by the taxpayers.

The reasons for the decline of the inland waterways are various but in the main are connected with the increasing success of the railroads in competing with them in both rates and service. During the second half of the century, there was very little improvement in the canals, although the railroads made great progress. The operation of the canals was irregular; they did not run at night; winter's ice or summer's drought often suspended operations; at best their traffic moved slowly. The railroads could often carry goods without unloading from the place of shipment to the final destination, sometimes by the use of spur tracks from factory to warehouse; the canals were seldom able to do this and the costs resulting from the necessity of transshipment and cartage were relatively very heavy—city cartage alone might exceed the freight charge for a 1,000-mile shipment. The railroads were better able to adjust their rates so as to secure more traffic, acting on the principle that any traffic that paid more than the direct costs of transportation contributed something toward the overhead charges. In some cases, too, the railroads stifled water competition by getting control of terminal facilities or the chief carriers operating on the water routes and by refusing to arrange favorable joint rail and water rates. Recent legislation has tried to check such

actions. A step towards more effective coordination in the regulation of transport facilities was taken in 1940 when inland, coastal, and inter-coastal water carriers were put under the control of the Interstate Commerce Commission.

This decline in the relative importance of the waterways has naturally reacted upon the commerce of various cities that once benefited through their location on such routes. Atlantic coast ports such as Boston, Philadelphia, Baltimore, and about Norfolk have been better able to secure more of the export trade in Western products. With the westward movement of the wheat belt and the construction of railroads to ports on the Gulf, as Galveston, or to Duluth on Lake Superior, traffic that went to Mississippi River points or to Chicago and then followed a water route has been diverted elsewhere. The conditions that once made New Orleans and the outlet of the Mississippi so important as to lead to the acquisition of Louisiana Territory have completely changed. This affords an excellent illustration of how technological progress can entirely alter the economic influence of physiographic features.

Improvements in the Waterways. After the period of state canal building came to an end, half a century followed during which about all of importance that was being done to improve the inland waterways was carried on by the Federal government. The opposition to such undertakings, which had been so strong before the Civil War, practically disappeared, and the appearance of a large annual surplus in the Treasury, especially in the eighties, provided a tempting opportunity which Congress was not slow to take advantage of. Most of the improvements were provided for in the River and Harbor Appropriation bills; the fact that these became known as the "pork barrel" bills suggests something of their character. Every Congressman sought to get something for his district and to secure sufficient votes appropriations were made for many improvements which had no adequate justification and at times proved utterly worthless. Of late years this abuse has been lessened by the creation of the Board of Engineers for Rivers and Harbors to investigate and make recommendations as to projects and by the more recent policy of making lump sum appropriations to be allocated to projects by the Chief of Engineers.

On the other hand many improvements that were really useful and urgently needed, notably in some of the more congested harbors, suffered from inadequate appropriations. In some cases the larger ports also spent considerable sums in improving their harbors and in providing better terminal facilities. The largest government appropriations were for the maintenance and improvement of the Mississippi River and its tributaries, the results of which will be noted shortly. Aside from this river system the most important appropriations have been for the larger ports

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where improvements have generally been the most useful. In recent decades until the depression, when an increase occurred, the appropriations for rivers and harbors have generally varied between \$20 million and \$40 million a year. Their total from the beginning up to 1937 was probably over \$1,600 million.

About the close of the nineteenth century there arose a more general demand for improvements in the waterways. This was fostered chiefly by sections that had suffered from the declining importance of the inland waterways and hoped to secure improvements—incidentally made at the expense of the public—that would revive that traffic. By this time, too, railroad traffic had grown to the point where, in times of abnormal business activity, many lines were seriously congested and it was argued that development of the waterways was needed to relieve this congestion. The most important improvement undertaken by a state was the enlargement of the Erie Canal, for which the people of New York state voted in 1903 to spend \$100 million. It was practically reconstructed by being made into a barge canal with a depth of 10 feet and was completed by 1918, though at almost double the estimated cost. Although an appreciable increase in traffic has occurred, chiefly due to the recent growth in the shipments of petroleum, and the government is now deepening the channel from Oswego to the Hudson River to 14 feet, the results thus far are not what were hoped for and it is a question whether the expenditure of an equal sum on the railroads would not have accomplished more. The construction of the Cape Cod Ship Canal, opened in 1914, was unusual in being undertaken as a private enterprise. It did not prove financially successful, however, and subsequently was taken over by the Federal government—there being no protest under these circumstances against government in business—and it is being enlarged to a depth of 32 feet. This was regarded as one link in a series of improvements that would furnish a protected water route along the Atlantic coast and the Gulf. The acquisition by the government of the Chesapeake and Delaware Canal in 1911 with the object of reconstructing it into a deep-water ship channel was with the intention of providing another link in this chain. The same project involved improvements along the inlets and sounds of the South Atlantic and Gulf coasts, though not of a character likely to attract much traffic. More recently the government began constructing a ship canal across Florida, which has now been abandoned.

Among the extensive improvements that have been most actively agitated are the Lakes-to-the-Gulf deep waterway and, more recently, the St. Lawrence deep waterway. The former would connect Chicago with the Gulf by using the existing Chicago Drainage Canal extended to the Illinois River and then improvements on the Illinois and Mississippi rivers. A board of government engineers which investigated a proposed

14-foot waterway reported against it; in its place the state of Illinois and the Federal government made improvements, practically completed in 1933, designed to provide at least a 9-foot channel between Chicago and Cairo, below which point at least this depth (during about half the year, nearly 14 feet) is maintained to the Gulf. Improvements designed to provide an equal depth from Pittsburgh to the mouth of the Ohio were completed in 1929; on the upper Mississippi the opening of a like channel to the Twin Cities is nearly finished. On the Missouri River a 6-foot channel to Council Bluffs is under construction, having been completed to Kansas City, and other improvements are being made farther up. How far traffic development will justify much of this outlay is very doubtful. Such gains in flood control and power development as have accompanied the improvements are not to be overlooked.

The St. Lawrence River project involves a waterway that will enable ships to reach Lake Superior and at the same time provide extensive water power development. Obviously, since this route follows the east and west direction taken by the great volume of the country's traffic and that traffic includes many commodities that at least might go by water, this project affords a better chance of meeting our transportation needs than the Lakes-to-the-Gulf project. Yet its economic justification is very seriously questioned and treaty complications have held it up.

It is always easy to arouse a demand for projects of this sort to be undertaken at public expense and risk. They create business and provide jobs and, even if no other benefit results, nobody suffers except as he shares in the general social loss. Whether these or any similar projects are desirable is a very complex question. It is clear that before they are undertaken a most careful study should be made of the engineering and economic aspects involved. The main questions to be determined are (1) whether traffic exists, or can be developed, that is likely to go by the particular water route projected and justify the cost; (2) if so, would an equal expenditure for other transportation improvements yield poorer results? If the answers to these questions are in the negative, there is the third question: Would the other results, such as development of economically usable water power, be sufficient more than to offset losses on the transportation side? In view of the recent history of inland water transportation it is obvious that costly improvements should be undertaken only after a detailed analysis of the economic problems involved. Our history affords far too many examples of waste due to indiscriminate and hasty action.

The most important waterway undertaking of the period, in fact the largest undertaking of the sort in history—the Panama Canal—remains to be described. The construction of a canal to connect the Atlantic and the Pacific had long been agitated and a French company had actually

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started one across the Isthmus only to become wrecked financially by the heavy outlay involved. When the United States government finally took over the enterprise its action was primarily based on noneconomic considerations—chiefly the strategic value of the canal. Although it was not expected that the canal would prove economically profitable at the first it was seen that it would afford some economic gains, not measured in toll receipts, through its competition with other transportation routes. The canal was completed in 1914 at a cost of \$365 million. The main traffic is between the east and the west coasts of the United States; it also secures much of the trade between the west coast of South America and the United States or Europe and a smaller amount of traffic with the Far East. The development of the California oil fields after 1922 greatly increased the traffic till it came to exceed that on the Suez Canal. In 1924, the resulting increase in the excess of receipts over expenses, relatively small before that time, provided a fair return on the cost of construction. Since 1931, the decline in the eastward shipments of oil, combined with the effects of the depression, has reversed this situation.

Other Improvements in Transportation Facilities. Besides the spread of the railroad system there were certain other important developments in transportation facilities during this period. One was the introduction of electric railroads, which first came into general use in the nineties. Though a comparatively recent innovation, it is difficult to imagine what the large cities of today would do if they had to forego the rapid transit facilities provided by the electric surface, elevated, or subway lines and revert to the slow-moving horse or cable car. Although primarily important for urban passenger traffic, the use of the electric railway for interurban lines provided many districts that could not sustain a railroad with both freight and passenger service; in other districts it afforded a useful service supplementary to that of the railroads. Since the war, however, rising costs of operation and the competition of motor vehicles have led to the abandonment of many lines in the less populous sections. As a result trackage has declined about one-third and today there are only some 30,000 miles of street railways in the country; motor buses serve some 400,000 miles of route.

Another important development is the still more recent introduction of the automobile. At the opening of the twentieth century there were only a few thousand cars in the country; by 1920 there were over 9 million cars and trucks, by 1939 31 million including the recent addition of busses, or more than two-thirds of the world's total. This registration was equal to one motor vehicle for every 4.3 people. Though thus far used more for passenger traffic, both business and pleasure, than for transporting goods, the latter use has undergone great expansion. Perhaps no innovation of the last quarter century has wrought greater changes in the daily life

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than the automobile. The extent to which it has entered into that life is well indicated by the fact that the estimated motor vehicle travel in the country in 1938 was 250 billion miles. Even assuming only one passenger per vehicle-mile this would mean an annual transport of almost 2,000 miles per capita.

Up to 1891 the responsibility for constructing and maintaining highways had been left almost entirely to the counties or smaller local units of government. But the highways thus provided failed to meet the wants of the motor vehicle users who required not only much better and far more expensive roads but a well-coordinated system for long-distance traffic. To obtain the financial assistance as well as the centralized planning which this required, both state and Federal support were enlisted. By 1917 every state had created a highway department to plan and develop state systems and in 1916 the Federal government first authorized extensive grants-in-aid especially designed to further the construction of important interstate routes. Assisted by the rapid increase in the receipts from gasoline taxes and motor vehicle registration fees, construction of better roads was rapidly pushed after 1920, so that by 1930 there were over 3 million miles of rural roads, of which nearly a quarter were surfaced.

As the improved highway system expanded it attracted an increasing volume of both passenger and freight traffic. Motor bus lines soon connected all sections of the country and motor trucks provided an equally extended service, though used more for short distances. Truck competition has seriously cut into the less-than-carload shipments of the railroads and has also secured some of the bulky traffic not moving great distances. Whereas the total tons moved by intercity trucks in 1932 was estimated as less than half that moved by the railroads, the ton-miles moved was only one-eighth of that carried by rail.

The problems that arose as the motor truck business expanded necessitated Federal control, which was provided by the Motor Carrier Act of 1935. This act placed interstate and foreign carriers under the authority of the Interstate Commerce Commission, which was given the power to establish standards for hours of work, safety, and equipment for all classes. In addition, common carriers are made subject to regulations very similar to those applicable to railroads; for those that carry only on contract the control is less extensive. The control of rates is limited to fixing a minimum.

The most spectacular of modern developments in transportation has been provided by the airplane. Though the first successful flight of the Wright brothers occurred in 1903, it was not until the first World War that the new device came into extensive use. It was first tried out for the transport of mail in 1918; the following year a transcontinental service

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was established which, on being converted into a day and night service in 1924, made the trip in less than a day and a half. Since then the provision of airway facilities, chiefly by the government under the Air Commerce Act of 1926, the construction of airports, chiefly by municipalities though often by private enterprise, and the improvement of the airplane itself have brought a rapid development of its varied services. In 1938 there were about 35,000 miles of commercial air lines in the domestic system; by 1939 American companies were offering a regular service across both the Atlantic and the Pacific, as well as to South America.

In the earlier years the lines were financially dependent largely upon the receipts from air-mail contracts which, owing to the desire of the government to stimulate the industry, always exceeded the postal receipts from this mail until 1938; but soon after 1934 passenger traffic became the chief source of revenue. In 1938 American companies carried over 1,500,000 passengers an average of 415 miles and at a speed of 153 miles an hour. Air-mail express service, formally started in 1927, has grown rapidly and, though chiefly confined to shipments of valuable papers, picture films, and other light articles where speedy delivery is important—the coast-to-coast service is 15 hours—it sometimes is used for more bulky things such as machinery replacement parts.

In March, 1940, the commercial air lines completed a full year without a single fatal accident. During this period, while flying over 80 million miles, they carried over 2 million passengers, nearly 10 million pounds of express, and almost 18 billion pound-miles of mail.

As with other striking innovations in transportation, the advent of the airplane at once necessitated governmental control. Since the service was so largely interstate in character, the control would have to rest primarily in Federal hands. At first, when carriage of the mail was the predominant service, control was given to the Post Office Department, but in 1926, under the Air Commerce Act, most phases of control were turned over to the Department of Commerce which received jurisdiction over airways, the power to establish and operate new airways as well as to promote their general development, and the right to establish regulations concerning safety, traffic rules, etc. Following other legislation chiefly concerned with air-mail contracts, the Civil Aeronautics Act of 1938 established a more comprehensive and centralized system of control vested in the independent Civil Aeronautics Authority. This authority was given powers over air transport very similar to those of the Interstate Commerce Commission over railroads in such matters as rates, pooling, consolidation, safety, accounting, and adequate service.

To provide a general idea of the relative importance of the different means for the transport of goods in the United States and the amount of work done by each as a result of the development just described, the

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following table, prepared by the Interstate Commerce Commission for 1932, is most illuminating. The figures for intercity trucks are only a crude estimate. Omitted in the table, since ton-mile figures were not available, are the coastwise and intercoastal (Atlantic-Pacific) traffic, which amounted to 94 million tons and 6 million tons respectively.

APPROXIMATE DISTRIBUTION OF TRAFFIC BY CHIEF CARRIERS

	Short tons, millions	Per cent	Ton-miles, millions	Per cent
Steam railroads.....	678.8	53.9	235,308	73.9
Great Lakes.....	39 5	3.1	24,733	7.8
Pipe lines (petroleum).....	80 0	6 3	19,600	6.2
Intercity trucks..	299 7	23 8	29,976	9 4
Inland waterways.....	151.2	12 0	7,904	2.5
Electric railways and airplanes..	11.6	0 9	583	0 2
		100 0		100.0

The fundamental problem that the country faces in connection with these different means of transportation is how to secure a coordination such: (1) that each shall, by itself or jointly with others, undertake the service for which it is best fitted; (2) that this service shall be adequately performed, at reasonable rates, without discrimination; (3) that unnecessary duplication and waste of effort shall be eliminated; and (4) that further progress shall be stimulated.

The Development of Facilities for Communication—The Post Office. Since 1860 the post office has experienced a very rapid expansion both in volume of business and in the extent of the services performed. Local free deliveries and collections were rapidly expanded after the Civil War. Rural free delivery service, begun in 1896, has been of great importance to country districts; by 1910 there were over 1 million miles of such service, which has since been increased by over one-third and serves nearly 30 million people. This service has made possible a reduction of over a third in the number of post offices, which had risen from over 28,000 in 1860 to the high point of 77,000 in 1901. A domestic money order service was started in 1864 and a foreign service in 1867. These have grown so that in 1935 over 200 million money orders were issued for a total of over \$1,850 million. The special delivery service was inaugurated in 1885, the postal savings system in 1911, and the domestic parcel post, long opposed by various interests, in 1913.

At the same time lower rates have been adopted. The domestic letter rate of 3 cents per half ounce under 3,000 miles fixed in 1855 was accepted, irrespective of distance, in 1863 and reduced to 2 cents in 1883. In 1885 the weight accepted at this rate was made one ounce, at which

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point it remained until a temporary advance to 3 cents during the war and another advance to the same rate during the depression. Some idea of the growth and importance of the post-office service can be gathered from the fact that in 1935 it was estimated that over 22 billion pieces of mail matter were handled. The total receipts of the post office have recently averaged over \$5 per capita as compared with \$0.27 in 1860 when rates were much higher.

The Telegraph, Telephone, and Radio. The extension of the telegraph system over the country continued at a rapid rate up to about 1890, since which time it has proceeded at a slower pace and the business has been developed more intensively. The transatlantic cable was successfully reopened in 1866; since then cable service has been extended over the seven seas and put all important nations of the world into quick communication with one another. The telephone was first exhibited in 1876 and, aided by constant improvements, notably the development of long-distance service, has undergone a phenomenal growth. By 1937 there were 90 million miles of wire in the telephone systems of the country and 30 billion reported telephone messages were sent. Just as in the case of the telegraph the advantages of unified control have brought a marked concentration in ownership which, combined with the importance of the service, has led to government control. Perhaps no invention of recent adoption has done more to hasten the speed with which business is conducted than the telephone. Wireless telegraphy, invented in 1895, was introduced about 1900 and at the start was chiefly used for communication between ships or ships and the land, where it was of great value. With improvements longer-distance communication became possible and in 1913 a transoceanic service was established. Since that time it has become a keen rival of the cable system and forced a reduction in rates.

Since the war broadcasting by radio has spread with great rapidity and affords a unique device for communication with large numbers either within the limited area of a large hall or over the vast expanse of country or much of the world. In this field of activity both technological and social considerations necessitated Federal control. The first law designed for this purpose, passed in 1927, was replaced in 1935 by one creating the Federal Communications Commission, to which control over telephones and telegraphs was also transferred. To this list of important communicating devices of the period should be added the typewriter, first put upon the market in 1876.

Printing, Publishing, and Advertising. Continued technological improvements in printing methods and the manufacture of paper, notably the development of the newspaper printing presses, the linotype, and the use of wood pulp for making cheap paper, have greatly reduced the cost of publishing and stimulated the use of this communicating

device. In some cases this gain has taken the form of lower prices; in others it has brought a greatly improved product. The growth in the number of newspapers and periodicals was continuous up to about 1893 when the total of 20,000 was nearly five times that of 1860. Although recently there has been some tendency to reduce the number of newspapers, there has been an enormous growth in the number of copies issued, thus reflecting a tendency toward concentration. By 1938 the net paid circulation of daily newspapers was nearly 41 million.

For the vast majority of people the newspaper and the magazine provide much the greater portion of their reading; consequently, the influence and social importance of these publications have become very great. The type of influences exerted by newspapers has altered with the changes that have taken place in their character during this period. In general the tendency has been to make a wider and more popular appeal. The type of news presented has broadened in scope; there is more of crime and scandal, more of sports, more of business, and more of real educational value. Outside of strictly news items there has been a marked development in special departments of interest and value to different groups. The spirit of political partisanship has been modified and the power of the editorial has waned. In the periodical press the outstanding features have been the tendency toward the popularization of the magazine, the marked improvement in the quality of the illustrations, and the increase of highly specialized periodicals accompanied by a growth in their usefulness.

In both the newspaper and the periodical press the great increase of advertising matter has been a striking feature. In fact, it can be generally said that advertising is the main product and the news or articles a by-product, since advertising provides the greater portion of the revenue. This has the advantage of enabling people to buy these publications at a much lower price than would otherwise be possible; it presents the danger that advertisers may have an influence over the publication of the news and the general policy of the paper.

In the period since 1860, especially in the second half of the period, the expansion of advertising of all forms has been remarkable and today it is estimated that from \$1 to \$2 billion a year is being spent for this purpose. An estimate for 1937 placed the outlay at \$1.8 billion of which almost a third was for newspaper advertising and about one-sixth each was for premiums and direct mail advertising; the next most important items were for the use of magazines and the radio.

This development is a product of various causes. The widening of the market with greater separation between producer, wholesaler, or retailer and their customers has necessitated the use of this communicating device to keep purchasers informed of what is offered for sale. The in-

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crease in the number of different commodities or in the varieties of similar commodities seeking purchasers has given the purchaser a vastly greater field of choice, which has been further increased by the growth in the proportion of purchases that were not necessities. This has lessened the buyers' dependence on any one commodity and compelled the seller to compete more vigorously through advertising and other ways for his trade. The increase in the opportunities for decreasing costs through large-scale production has given an added impetus to advertising to enlarge sales. Not only has there been an increase in the necessity for, and the advantages of, advertising in these and other ways, but there is a wider recognition of its influence. This influence has been augmented by a more scientific study of advertising methods tending to increase their efficiency.

The primary function of advertising is to inform possible purchasers of the existence, the character, and the price of goods or services that they may desire—a function of great aid in enabling people to satisfy their economic wants more completely and efficiently. That some advertising does not perform this function properly, in that it may be misleading, is an evil; yet progress is being made in lessening this evil, especially through the action of the Federal Trade Commission and that of various voluntary trade associations.

Advertisers seek not only to inform purchasers where goods can be obtained but to create new wants as well, with the result that advertising has become an important factor in determining the kinds of goods consumed. That this may at times lead to socially undesirable results is obvious; but so far, with few exceptions, the only safeguard depended upon is such intelligence as the consumers possess and choose to exercise. It is not infrequently charged that the growth of advertising, particularly in the more highly competitive forms, represents much social waste. In a certain sense—the same sense in which all competition involves some waste—this is undoubtedly true. But its justification is supposed to be found in the reasons that are presumed to justify competition in general, the incentives to efficiency and progress which are supposed to more than offset the wastes involved. Most advertising is but one phase of modern keenly competitive individualism. Here, as elsewhere, the real problem is where to draw the line setting limits to this competitive individualism such that the losses shall not exceed the gains.

CHAPTER XXXI

AGRICULTURE SINCE 1860

Introduction. In 1860 agriculture was by far the most important economic activity of the country. The continuation of the process of opening up and settling the West after that date helped this activity to retain such a position for nearly a generation longer. But the practical disappearance of the supply of free fertile land greatly altered the situation; thereafter, expansion through extension to new farming land was slower and growth depended to a greater degree upon more intensive methods of cultivation and success in counteracting the effects of soil depletion. Meanwhile manufacturing was expanding with great rapidity. By 1890 the net value of manufactured products exceeded the value of agricultural products and by 1920 the number of people engaged in manufacturing exceeded the number engaged in agriculture. In short, the second half of this period is marked by agriculture's losing its position as the predominant economic activity of the country; manufacturing took its place. It can no longer be said that we are primarily a nation of farmers.

The period was also marked by important developments affecting both technological methods and the economic organization of agriculture. During the first half of the period, the chief changes arose from the development of the railroad system or other means of transportation and the rapid increase in the use of agricultural machinery. The changes in the economic organization of agriculture that followed therefrom had begun some time before 1860, but they were particularly marked thereafter and are seen in the greater tendency toward commercial agriculture and, mainly in the trans-Mississippi region, the growth of one-crop, large-scale farming. Since about 1890 the most significant developments have been connected with the introduction of more scientific methods of agriculture, which went along with the tendency toward intensive farming, and with efforts to improve the economic position of the farmer.

Among the other extractive industries this period is marked by a very rapid expansion of mining and lumbering, particularly favored by the opening up of the Far West. In mining the introduction of more scientific methods helped to lessen some of the speculative risks and in both mining and lumbering there was a decided tendency toward large-scale operations. These industries, however, still held only a minor position among the economic activities of the country.

Technological Progress in Agriculture. Machinery. Though much of the most revolutionary of the agricultural machinery tending to eliminate the use of hand implements had been invented before 1860, it was not until the Civil War, and afterward, that rapid progress was made in bringing this machinery into general use. Constant improvement and increased specialization of this machinery further increased its use. Among the machinery since devised, the twine binder, the combine, and machines using automotive power are among the most important. As horses supplanted oxen, so now the motor is driving out the horse and the mule in many forms of farm work and tasks are performed with less labor, greater speed, and at a lower cost. In some cases, too, the development of machinery has simply resulted in the transfer of work formerly done on the farm to the factory, best illustrated in the preparation of dairy products and the packing industry. Western farms were particularly well adapted to the use of machinery, the ground was relatively level, the size of the farms made the use of machinery more economical, and the scarcity of workers provided added incentive for employing labor-saving devices. The larger and more expensive machines could be economically used only on a single farm of large area; they tended to promote large-scale farming. Yet the trend of general development in the latter part of the period was toward a reduction in the area of the largest farms. These two opposing tendencies were in part reconciled by cooperative use of the larger machines, in part by the development of automotive machinery designed for the smaller farms and in part by the transfer of the machine processes to the factory.

Throughout this period the United States led the world in the development and use of farm machinery. Between 1860 and 1890 the value of implements and machinery on the farms doubled in spite of lower prices; between 1890 and 1920 the value rose from nearly \$500 million to almost \$3,600 million, though allowance must be made for the much higher price level at the latter date. Between 1900 and 1935 alone the amount of power used on farms is estimated to have increased eight times. The average farm worker of today actually cares for about three times the crop acreage that he did around 1850 and he commonly obtains a larger yield per acre. It has been estimated that the increase in efficiency, per unit of labor, obtained by substituting the most efficient machines and methods for the earlier hand tools and methods (those employed in agriculture before the middle of the last century) would average about 1,200 per cent in the case of the five chief crops of the country; in the case of many other farm products it would be much less than this. In practice, however, only a portion of this contribution of science and technology to the potential output has been utilized. The actual increase in productivity per worker for farm products in general is estimated at 300 per cent by 1920; the un-

usually rapid rate of advance during the following decade raised this to around 400 per cent in 1930. Considerable as this gain is there is still room for a great advance, even assuming no further technological and scientific progress.

Science and Agriculture. Another factor of great importance, especially since about 1890, has been the growing use of more scientific methods in farming. Though the opportunities for the use of science on the farm are just as great as in other lines of economic activity, farmers have been slow in adopting scientific methods owing to conservatism, inertia, ignorance, the small scale of operations, the cheapness of land, and the lack of capital. Only a few of the numerous ways in which the progress of science in such fields as botany, chemistry, bacteriology, zoology, and entomology has been of use to agriculture can be mentioned; they include such things as soil analysis, the chemistry of fertilizers, breeding and selection of seed and livestock, the control of pests and livestock diseases, and methods for handling and preserving farm products.

Though private initiative has been active not only in the general progress of science and its application to agriculture but also in furthering the adoption of scientific methods by farmers, the state has been particularly prominent in these activities in recent years. There are various reasons why the state has been more generous in supplementing private initiative in this than in most fields of science applicable to economic activities. The large corporation engaged in manufacturing can easily finance such experimentation, is apt to recognize its importance, and is likely to secure great gains thereby. The individual farmer can seldom pay the cost of such investigations; he is less likely to have the necessary initiative or to secure the cooperation of others; and the gain to any one is apt to appear small, though for the aggregate of farmers it may be enormous. Add to these conditions the general importance of agriculture and the fact that the farmers until within a couple of decades have been the most numerous economic group in the country and in most states are still predominant and the chief reasons for government action will be clear.

Although signs of a growing recognition of the importance of agriculture are seen in the land grants for agricultural colleges in 1862 and in the creation of a separate Department of Agriculture the same year, it was not until 1889 that the head of this department was given a position in the Cabinet. The department was not very active in scientific work during its earlier history, but the farmers' institutes, inaugurated in New England just before 1870 and since adopted elsewhere, helped to spread a knowledge of better methods among the rural districts. The first separate state agricultural experiment station was established in Connecticut in 1875; within a few years several other states took similar action. A much more

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rapid extension of this work occurred following the action of Congress in passing the Hatch Act of 1887 which provided a Federal appropriation for experiment stations in connection with agricultural colleges. In 1890 Congress started an appropriation of \$25,000 a year each for the agricultural colleges and since then has greatly increased the amount. About this period the agricultural colleges began to expand their work very rapidly, there was a marked growth in their attendance, and the study of agriculture was extended into the high schools in rural districts. The government Weather Bureau, started in 1870, was transferred to the Department of Agriculture in 1891 and, with the rapid extension of its service since then, has been of great aid in helping the farmer to protect his crops. The department has also introduced many thousand varieties of foreign plants some of which have proved very valuable additions to our agricultural products.

Meanwhile many of the states were active in promoting the development of better agriculture, both through a study of its problems and through education of the farmers. The passage by Congress in 1914 of the Smith-Lever Extension Act provided Federal assistance in the form of generous appropriations for states that made similar appropriations to carry on these activities. In 1917 another act of Congress granted funds to be used for agricultural instruction in high schools. One of the most difficult of the problems connected with these activities of the state has been to get the farmers to put the knowledge obtained from all this scientific investigation into practical use. Although some progress has been made in this direction, there still remains a vast field for improvement. It was in recognition of this fact that recent legislation finally resorted to the expedient of offering to pay the farmer who would adopt specified improvements in his methods of cultivation.

Changes in the Economic Organization of Agriculture. The Economic Position of the Farmer. While the state and Federal governments were becoming so active in aiding agriculture, the main attention had been centered upon promoting more scientific methods; in recent years, more especially since the postwar agricultural depression, greater recognition has been given to the importance of studying the farmer's other problems and trying to improve his economic position. In order to understand what was done along these lines and to comprehend the reasons for the reforms demanded by the farmer or the farmer's reactions on political issues, a brief analysis of the economic position of the typical farmer is necessary. This is the more essential since until very recently it has received scant attention, far less than has been given to the economic position of the laborer, in spite of the fact that during most of the country's existence the farmer has exerted the greater influence upon our history.

In the chapter on agriculture during the preceding period some of the changes affecting the economic position of the farmer were noted, par-

ticularly those arising from the greater development of commercial agriculture. Before describing his position today it is desirable to point out certain changes that have had important reactions upon it since 1860. The development of better facilities for transportation and communication further widened the markets for farm products, made them more nearly national and often international in scope, and greatly increased the tendency toward commercial agriculture with the reactions upon the economic position of the farmer which that involved. At the 1930 census over 80 per cent of all the products of most kinds was sold or traded.

One result was greatly to intensify the competition that the farmer had to face in the markets where he sold his products; the West became a more serious competitor of the East than ever before; the same was true, though in a less marked degree, of the North and the South; and all sections faced greater competition from other countries, often from regions being newly developed. To meet such competition successfully, if possible, required more attention to the reduction of costs. The greater degree of specialization was another result, and it should be remembered that this meant not only greater specialization in the crops produced but an increase in purchases of things not produced on the farm. The farmer tended to become not only a pure farmer and less of a Jack-of-all-trades but a specialist, though the specialization might be in a correlated group of crops or in one main crop. To a greater extent than ever before he became dependent economically upon the rest of the business world.

Another important reaction upon the economic position of the farmer was a product of the various changes that tended to make farming, along with other economic activities, more capitalistic in character. The fact is often overlooked that the farmer's investment in what may be called "fixed plant" bears a considerably higher ratio to the value of his production than is to be found in most lines of industry. It should not be forgotten, however, that this investment also includes a home. The increased use of machinery, the introduction of more scientific methods, and the steady rise in the value of land up to 1920, particularly rapid after the close of the nineteenth century, all necessitated a much larger investment on his part. At the postwar peak the value of agricultural capital including land, buildings, machinery, and livestock was over \$12,000 per farm; by 1935 it had fallen to less than half this amount. This has made the conditions under which the farmer can obtain capital a more important matter, and the growing use of machinery has added to his burden of overhead costs and decreased the importance of his labor problem.

The rise in the price of farm land, by increasing the value of that factor of production as compared with the value of the other factors, has tended, in accordance with the law of proportionality, to induce farmers to be more economical in the use of land and thus has led to more scientific and more intensive methods of farming. All this means that today the

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farmer, to be successful, must be more careful and expert in the management of his farm; he must study costs and keep accounts; he must watch the market and his competitors; he must organize and keep in touch with the world; he must be both more scientific and more businesslike in his methods.

The economic position in which the typical American farmer finds himself as a result of the developments of this period can be briefly summarized under a few heads. In the first place, he is a small-scale producer though producing on a larger scale than the European peasant. In 1929, which was a fairly prosperous year, over a quarter of all the farms in the country yielded less than \$600 worth of products each, including those consumed by the family; practically half of the farms produced less than \$1,000 worth—the total for this latter group made up only 11 per cent of all commercial production. Less than 4 per cent of the farms produced over \$6,000 worth each, and more than 47 per cent of all farms, contributing altogether over 60 per cent of the total commercial production, produced between \$1,000 and \$6,000 apiece including the amount consumed by the family. Thus, when nearly half the farms raised relatively little for sale and all but a small fraction of the others produced less than \$6,000 apiece, it is obvious why nearly every American farmer can be considered a relatively small-scale producer.

Closely related to this characteristic are the very limited resources, the comparative poverty, and the backward conditions of a large proportion of the farming class. It has recently been stated that at a conservative estimate "one-third of the farm families of the nation are living on standards of living so low as to make them slum families." Although this condition is far more prevalent in the South than elsewhere, there are sections in the Southwest and the West North Central states where it is fairly common. A survey of twenty typical farming areas in 1935-1936 led to the conclusion that the average farm family spent \$669 a year for commodities and services used for consumption purposes and obtained the worth of \$462 more from the farm. The total thus secured obviously could provide only a relatively low standard of living. That the income of the agricultural class as a whole is also relatively low is suggested by the fact that for many decades previous to 1929 it is estimated to have been around one-half the percentage of the total national income that the farm population constituted in the total population.

These disadvantages are commonly thought to be more or less offset by the greater independence and economic security as well as other features of farm life. These are certainly real. Few can be more independent than the farmer and the reliance upon the greater economic security offered by the farm was well indicated in the depression by the surge back to the country on the part of those who had such refuge available. Owner-

ship of a farm at least provided shelter, a chance to produce a large proportion of the necessary foods, and always a chance to work. Yet during that depression, though partly a product of the severe droughts, at least one out of every four rural families received public assistance at some time. It is also to be remembered that, with 42 per cent of the farms operated by tenants and a considerable number of hired farm laborers in addition, there is a large group that lacks the security of ownership, to say nothing of the owners facing the danger of mortgage foreclosure. All these conditions indicate basic causes of weakness in the position of a large percentage of the farmers.

The farmer is also relatively isolated and, still possessing the independent spirit of the frontier, cooperative action is hard to secure except under great pressure. But his great staple crops are produced for, and have their prices fixed in, markets that are often international in scope, markets into which hundreds of thousands if not millions of producers are pouring their output. This creates one of the great problems in his economic position—the difficulty of securing such an adjustment of demand and supply in these vast markets as will fix a price that affords a reasonable return. Fortunately this difficulty is lessened by the fact that many of the products are, relatively speaking, necessities, the total demand for which is not subject to such great fluctuations as that for many commodities; there may be great fluctuations in the demand made upon the output of a given region if the supply from other regions varies greatly. Unfortunately for the farmer, this same relative inelasticity in the demand for his products means a substantial drop in price if the output happens to be unusually large. Numerous farm staples are, therefore, subject to marked fluctuations in price, some from year to year, others over several years, sometimes in regular cycles.

The conditions under which farm crops are produced make rapid changes in output far from easy. Adjustment of the output is difficult because it is governed by the seasons and the process of production may require several months or even years. Many of the products are relatively perishable and cannot easily be withheld from the market, even if the farmer is economically able to withhold them. Though the farm and its equipment represent less highly specialized agents of production than the factory and its machinery, the opportunities to shift from one crop to another are decidedly limited; while the conservatism, inertia, and ignorance of the farmers present an added obstacle. Finally, the uncertainties of weather, pests, or diseases may affect the output of products in wholly unforeseen ways.

On top of these obstacles to a ready adaptation of output to demand there is that arising from the lack of effective organization among farmers such as might enable them to control the total output, as is done in

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branches of industry where centralized production prevails. With innumerable farmers producing for a given market—very often a world market—it is impossible for them to unite to limit output. Moreover, each one knows that his own output is so small in relation to the total that it will have no effect upon the market price. If he is hard up for money he may try to increase his output, even if prices are low, or possibly because of that fact; always he hopes that the burden of reducing the output will be assumed by others and that he may benefit thereby. The result is that, since nearly everybody waits for somebody else to assume this burden, there is apt to be little if any reduction in output; there may even be an increase, as was the case in the postwar depression, and the process of adjusting the output to the demand is greatly prolonged. It was to overcome this obstacle and to induce a general move to curtail output that resort was made to government intervention on such an extensive scale after 1932.

As a small-scale producer the farmer, like the laborer, finds himself in a weak position in his economic dealings with certain groups. His products, being relatively perishable, cannot long be withheld from the market. As he is seldom in a strong financial position and often in debt, he may be forced to sell to meet his obligations. In his transactions with the banks, the railroads, and most of the people who purchase his staple products, as well as with those from whom he buys, he is commonly dealing with larger, more powerful, better informed interests which are in an advantageous position to bargain with him. This results in a feeling of helplessness in his dealings with such groups; often he believes, whether right or wrong, that they take an unfair advantage of him. This economic position explains the widespread hostility of the farmers toward the railroads, the money lenders, the commission men, the grain elevators, the packers, the produce exchanges, and the manufacturers of, or dealers in, farm supplies. It is against such groups that they direct their crusades when sufficiently aroused by unfavorable economic conditions. The reforms demanded are typically such as the farmers believe will help to lessen or eliminate these weaknesses in their economic position.

Farmers' Organizations. The economic position of the farmer combined with his whole social environment has made united action for the purpose of improving that position, economically or otherwise, particularly difficult, especially when attempted on a basis that is more than local. Yet in every phase of social life there are seen a steady increase in the number of activities carried on by united action and a tendency to organize in groups of larger and larger size. This tendency, together with the decreasing proportion of farmers in the population and the underlying conditions that have always made united action among them difficult, has increasingly impressed the farmers of the country with the

necessity for greater unity of action, both locally and nationally, if they would safeguard and promote their varied interests. The development of farmers' organizations during this period was a factor affecting their general economic position and in part determined the particular measures through which the farmer endeavored to improve that position. At this point, however, only the more important of the larger organizations seeking varied objectives will be described; those of more specialized purpose or more local character will be dealt with in connection with changes in particular phases of the farmers' economic position.

Among the larger of these organizations that developed in the period following the Civil War, the attention given to measures for improving the farmer's economic conditions was prominent; although, theretofore, improvement in farming technique had been most emphasized. That objective, together with educational and social advancement, continued to be important. The first organization to attain a position of prominence was the Patrons of Husbandry, commonly known as the Grange. Started in 1867 by a group of people in the government service led by O. H. Kelley, it grew slowly at first, but in the period of low prices after the panic of 1873 the membership mounted rapidly and reached the high point of over 850,000 in 1875. Its chief strength was in the Central Northwest. The local granges carried on various educational and social activities and gave especial attention to cooperative enterprises.

Through the state and national organizations, legislation favorable to the agrarian interests was sought. At this time the chief agitation was for legislation to control the railroads and to increase the quantity of money in the hope of raising the prices of farm products, an increase in the greenbacks being the popular measure for this purpose. Whereas the organization was nonpartisan, it advocated voting for candidates favoring the farmers' demands, and many of the members were active in the Greenback party. After 1876 the Grange declined rapidly, chiefly due to overrapid growth and the failure of many cooperative undertakings, though its activities had been influential in securing the Granger laws and in the agitation for cheap money. By 1890 the membership had fallen till it included little more than 100,000; since then there has been a fairly steady increase so that by 1922 it had risen to nearly 700,000. Today its greatest strength is in the North Atlantic states and its most important activities are along educational and social lines, though the interest in cooperation has revived and the organization is active in pushing economic reforms sought by the farmers.

Following the decline of the Grange in the late seventies the Farmers' Alliance rose to the leading position among their organizations. It was the outgrowth of local agricultural clubs which had been formed, chiefly in the Southern and Middle Western states, beginning about 1858, and

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had been mainly concerned with social and educational activities or the protection of some local economic interest. These in time developed into state or sectional organizations such as the Texas Alliance or the Louisiana Farmers' Cooperative Union. These two organizations were united in 1887; the next year they absorbed the National Agricultural Wheel and subsequently took the name of the National Farmers' Alliance and Industrial Union of America. Later agreements were made with other organizations including the Knights of Labor, for the Alliance was always sympathetic toward labor; but the attempt to include the National Farmers' Alliance, which had developed rapidly during the eighties in the Northwest and is commonly called the Northwestern Alliance to distinguish it from the southern organization, failed. At the height of its power in the early nineties the Alliance and the other farmers' organizations with which it was associated had a membership which was probably around 3 million. It then got drawn into politics and the movement to organize the Populist party, was absorbed in this during the depression of the middle nineties, and soon quickly disintegrated.

After the severe depression of the middle nineties, which had hit the farmers harder than any other since the early forties, there followed more than two decades of marked prosperity for them, when agricultural prices and the value of farm lands advanced rapidly, culminating in a speculative boom during the first World War, which was followed by a severe reaction beginning in 1920. During these prosperous years the relative contentment that prevailed afforded no such incentive for general organization as existed during the earlier periods of depression. Still, the fact that the need for more scientific and businesslike methods in farming was greater than ever, combined with better facilities for contact between farmers and a growing recognition of the advantages of organization for educational, social, and economic purposes, led to an extensive development of their organizations of various types. For the most part they were on a relatively small scale and had limited and very specific objectives, such as the livestock breeding associations or those for marketing some particular product. There were, however, a few that had more general purposes and extended over a large area.

The Grange, now active chiefly in educational and social lines, enjoyed a steady growth which, if less spectacular than in its earlier history, was built on a surer foundation. The Farmers' Union, starting in the South Central states, where its first considerable growth took place, has since become a fair-sized organization, though its chief strength now lies in the Central Western states. It has been especially active in developing cooperative enterprises among its members. Another organization of fair size which developed at the same time is the American Society of Equity. This and its offshoot, the Farmers' Equity Union, have been chiefly

concerned with securing better methods for marketing various crops, of late years chiefly through cooperative enterprises. These organizations have met with most success in Wisconsin, Kentucky, and neighboring states.

More recent in its development was the Non-Partisan League, which attained its chief strength in North Dakota and the near-by states. It was mainly concerned with efforts to improve the economic position of the farmer, particularly in the marketing process. To accomplish this, extensive activities on the part of the state were advocated, and to secure state assistance the organization became active in politics. Though considerable legislation was secured in North Dakota, the results fell far short of what was hoped for and, like many other such organizations, the League found that the conditions it sought to remedy were deep-rooted in our economic organization and that their reform was a very complex and extensive problem.

The most recent important organization to develop among the farmers is the American Farm Bureau Federation. Starting in an effort directed toward improving farming methods under the guidance of a county agent, a plan that became widespread under the Federal assistance provided by the Smith-Lever Act of 1914 and the cooperation of state and local authorities, the County Farm Bureaus formed state federations and in 1919 the American Farm Bureau Federation was organized. By 1921 federations existed in all but two states, and the total membership of nearly 1 million made this the largest farmers' organization in the country at that time. As the state and then the national organizations developed, more and more emphasis was placed on economic reforms which they sought to obtain in part through legislation and in part through the bureau's own activities. Cooperative buying, chiefly through the county bureaus, and cooperative marketing organizations, each dealing in one commodity and organized on state or national lines, such as the United States Grain Growers, Inc., have been among the schemes most actively pushed. Unfortunately the success of some of its largest undertakings was not what had been anticipated and this, combined with the effects of the subsequent depression, caused a heavy loss in membership. The organization was active in pressing for farm legislation and, as the agricultural conditions improved, paid membership rose to over 400,000 in 1937, distributed among thirty-nine state federations with their chief strength in the Middle West.

The record of these more general organizations illustrates the difficulties that farmers face in trying to unite to protect and further their interests. It has generally taken a period of severe depression to arouse any large movement toward organization; the rapid growth of these organizations at such times proved an insecure foundation; the reforms ad-

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vocated frequently could not be carried through or failed to provide permanent relief. Often the real causes of their difficulties were not adequately analyzed or else proved so deep-seated and complex as to be beyond rapid alteration; internal dissension and political wrangles weakened the organization; and discouragement from failure to secure greater results, combined with the return of more prosperous times—seldom in any appreciable measure due to the organizations' activities—put an end to the movement.

Nonetheless, these movements and the agitation and discussion connected with them have not been without results. They have been a factor in shaping much legislation, particularly that dealing with monetary or banking matters, farm credits, control of railroads, regulation of the packers and produce exchanges, the tariff, agricultural education, and co-operative marketing. They have promoted better methods of farming and served to improve the social life of rural communities. Through their mistakes as well as through their successes they have helped to show the farmer the underlying causes of his difficulties, the measures really necessary to better his condition, and the value of wisely guided organization. But the difficulties in the way of securing an enduring and effective organization of farmers with numerous activities and widespread membership are great, and for many purposes smaller organizations with narrowly limited objectives have proved more effective. No description of these smaller organizations can be attempted but in the account of changes in the farmer's economic position to which we now turn some reference to their chief lines of activity will be made.

The Farmers' Marketing Problems and Organization. Among the economic changes that affected the position of the farmer, those altering the conditions under which his products were marketed were particularly important and hence in part explain the greater interest that the farmers began to take in their marketing problems. As previously noted, the farmer raised more and more of his products for sale and the markets in which they were sold tended to become larger and more highly competitive. The products were shipped to market over greater distances; they passed through a larger number of hands; and the various middlemen rendered a greater number of services before the products reached the consumer. All this tended to increase the spread between the price received by the farmer and that paid by the consumer, though this tendency might be partly or wholly offset by various gains in efficiency. When the farmer saw that in many cases he was getting only a third or even a fifth of the price paid by the consumer for products that had not been altered, he felt that something was wrong.

As trade increased in volume along with the widening market, the various business units that handled his products grew in size, while the scale of operations of the ordinary farmer still remained small; and he

found himself confronting powerful business organizations before which he seemed helpless. He shipped his products over vast railroad systems that monopolized transportation; he became dependent on large warehouses and systems of line elevators; commission men for whom the trade of any individual farmer was of slight importance handled his products; the prices of his great staples were fixed in distant markets, often on the new produce exchanges, the operations of which he seldom understood and always mistrusted. Among those who bought his products as raw material to be manufactured or distributed, the tendency toward large-scale enterprise led to concentration and possibilities of combinations such as the tobacco, the beef, or the local milk "trusts." Facing such developments the farmer naturally became greatly concerned over marketing conditions.

To meet this situation they began to undertake various marketing functions themselves. For the most part this was done through the organization of marketing associations, commonly on a cooperative or semi-cooperative basis. Most of the growth of these associations has taken place within the last quarter century and the more successful have been those handling a rather specialized crop where production for the available market has been centralized in some one locality. The California Fruit Growers' Exchange handling citrus fruits is an outstanding example. Its success, supplemented by active state support, led to the formation of many marketing organizations, particularly those dealing in the more specialized crops of the Pacific coast region such as prunes, apricots, apples, raisins, walnuts, rice, berries, and dairy products. In other regions associations for handling tobacco and dairy products became fairly common, and a great variety of the minor agricultural products were in part handled by farmers' organizations.

In the case of the great staple products, however, little success was met with until government support was afforded. The various attempts to organize the cotton growers brought no enduring results; much the same was true in the case of the wheat growers and the livestock raisers, though there were numerous small local organizations undertaking the cooperative marketing of these products. The Census of 1930 reported 6,000 agricultural cooperative marketing associations having a total membership of nearly 700,000 and over \$1 billion of sales, of which one-half was from grain; livestock, fruit, and vegetables were the only other products of importance. Since the advent of the Agricultural Adjustment Administration, however, as will be explained in the next chapter, the situation has been completely altered and cooperative marketing greatly stimulated.

The extent to which these associations have engaged in marketing activities and the results secured have varied greatly. Thus some of the fruit growers store, grade, and pack the fruit, advertise it under a brand

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name, help finance the movement, and carefully control the wholesaling process. On the other hand many of the local livestock shipping associations attempt only to provide for common action in the shipment and sale of their stock. In such a case the gain to the producer is generally limited to some saving through the larger shipments and perhaps a more skillful handling of the transaction. In the larger associations far greater advantages are at least possible, though much depends on skillful management.

When marketing through such an association, especially if it is adequately financed, the farmer is no longer in a weak position in bargaining for the sale of the product; he does not ordinarily feel that his products may be undergraded or short-weighted, that the handling charges are unreasonable, or that the price obtained is less than the market conditions justify. Furthermore, the association can prepare the produce for the market in better shape than can the farmer; it can see that the commodities are marketed in a more orderly manner and thus help to stabilize prices; it can advertise the products and create a larger market; it can aid him to use better methods; and in numerous ways, such as obtaining better freight rates or furthering desired legislation, it can protect and advance the economic interests of the group. Many of these things can be done with still greater effectiveness where the association is able to secure control of the greater portion of the crop disposed of in a given market; the association may even attain the powers of a trust.

Until the generous legislative and financial support obtained from the government in recent years became available, this position was found very difficult to secure, even where the producers were largely concentrated in one locality; yet such an achievement was not unknown. Thus about 1907 the growers of Black Patch and of Burley tobacco in Kentucky, suffering from abnormally low prices due to overproduction and a combination among the buyers, were driven to pooling their crops and limiting the output. Though they resorted to the violence of the Night Riders in carrying the plan through, they did succeed ultimately in selling their crop at a much higher price. Although these organizations soon disintegrated, a similar movement of considerably greater scope developed during the postwar depression, only to experience a like fate till the government came to the rescue. An instance of a particularly successful organization based upon almost complete control of a crop is afforded by the California Raisin Growers' Association. However, coming under the condemnation of the antitrust laws, it was forced to make some changes in its organization and practices to secure the purely cooperative character which gave it exemption from these laws.

It is very rarely, however, that such marketing organizations have been able to exert any appreciable and enduring influence on the price

level of farm products in the general market, until quite recent times when government support was made available. In the main these associations have served to protect the farmer by strengthening his position as a seller and by providing for the performance of a greater or smaller proportion of the middlemen's functions through organizations controlled by the farmers and managed in their interest. However, through experience with such activities, the farmer is learning that the middlemen were not altogether responsible for many of the things for which they had been blamed, and he has found that the advantages to be obtained in carrying on these functions himself, though well worth the effort, were seldom so great as many had claimed they would be.

Besides the farmers' movement to engage in marketing, there were a number of other developments in the market organization affecting farm products of which brief note should be made at this point, though the main developments in marketing are described in a later chapter. Very marked progress has been made in establishing standard grades and providing for the more general grading of agricultural products. Increasingly this has been done by the farmers' marketing associations, each establishing and maintaining its own grades; but in the case of many of the great staples a further step in advance has come through the fixing of grades that were national in their application. Thus the Federal government has established standards applicable to wheat, cotton, wool, apples, and other products. Once graded, the cost of subsequent handling of the products is reduced and the market for them is widened; at the same time the farmer is better assured of obtaining a fair price and has a greater incentive to improve the quality of his output. The rapid development of the warehouse system for the handling of farm products has been useful in providing better storage facilities and in making possible a more orderly marketing of seasonal products, and state and Federal legislation has better protected those using these facilities.

The development of highly organized produce exchanges for dealing in some of the staple agricultural products has been of advantage in the marketing of them. Though the farmer is typically distrustful of these exchanges, and their operations are not wholly free from abuses, there is no question but that the functions they perform are useful. They provide the freest and most highly competitive markets as well as a constant market. The prices fixed there are known to all. They also provide opportunities for shifting the risks arising from price fluctuations to groups that specialize in that activity; on the whole they tend to lessen price fluctuations and to stabilize the market. Federal legislation such as the Cotton Futures Acts of 1914 and 1916, the Grain Future Trading Acts of 1921 and 1923, and the Commodities Exchange Act of 1936 have been passed with the object of remedying certain abuses. The Packers and Stockyards Act of

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1921 was designed to afford better protection to the farmer in the less highly organized markets in which livestock is sold.

The Financing of Agriculture. The rise in the value of farm land combined with the greater outlay necessary for farm supplies and equipment has tended to increase the importance of the conditions under which the farmer was able to secure financial assistance. As the main developments in the field of financial institutions are described in a subsequent chapter, only brief note will be made at this point of the developments chiefly affecting him.

The farmer possesses in his land an asset that has long been commonly regarded as one of the most desirable forms of property available as security for a loan—a fact that, by reducing the risk, tends to lower the rate of interest on farm mortgages. A counteracting disadvantage is found in the various conditions that tend to limit the supply of lendable funds available for the farmer. Before a loan is granted, an investigation of the farm and its owner must be made on the spot, preferably by some one familiar with the locality. This tends to limit the sources from which loans can be secured to those that are local, unless agencies are developed to make this investigation for lenders living at a distance. In the older, wealthier sections of the country, where the local supply of lendable funds is relatively large, this may not be serious; but, together with the somewhat greater financial risks attending Western farming, it is one of the factors most responsible for the high cost of farm loans which long prevailed in the newer sections of the West, where the rate of interest was often from 7 to 10 per cent, as compared with 5 or 6 per cent in the North Atlantic states. Commission charges were also much higher there.

Another limitation was the fact that the banks belonging to the national banking system were not allowed to make loans on real estate security until the adoption of the Federal reserve system in 1913. The fact that the former system was designed primarily to meet the needs of commercial banking meant that the funds it controlled were not available for the most important need of the farmer. Consequently, as far as banks were concerned, the farmer seeking a farm mortgage loan was chiefly dependent upon state banks, trust companies, or savings banks; even among these institutions not a few were disinclined to invest heavily in farm mortgages.

In spite of these conditions tending to limit the supply of lendable funds available for the farmer, there were numerous developments during this period that gave him better facilities for borrowing and enlarged the market for farm mortgages. Among these was the rapid growth of concerns dealing in such mortgages, typically serving as an intermediary between Western borrowers and Eastern lenders. The development of the Farm Mortgage Bankers' Association is one result of this

growth. Another opening came with the rapid growth of life-insurance companies and the increasing tendency among them to invest in farm mortgages. In the sections where they made extensive purchases, chiefly the Central West, their operations had an appreciable effect in keeping down the rate of interest and other charges. An estimate of the farm mortgage indebtedness of the country about 1915 placed the total at nearly \$3,600 million, of which life-insurance companies and banks each held about one-fifth; but the greatest portion was held by private individuals. During the speculative activities engendered by the prosperous war years, the farm mortgage debt was more than doubled, reaching nearly \$8 billion in 1921, with another advance to over \$9 billion in 1930, after which it fell to \$7 billion in 1938. The difficulties that confronted farm mortgage holders in recent years and the aid extended by the government have led to a general shift in the holding to Federal agencies.

With the rapid rise in prices and the value of farm lands, which began about 1900, culminated in the speculative boom of the war, and was followed by the agricultural crisis, a great impetus was given to the study of the question of farm credit which bore fruit in important legislation. By the terms of the Federal Reserve Act of 1913 national banks were allowed, under certain restrictions, to hold farm mortgages and provision was made for short-term paper used in financing the marketing of agricultural products. The Federal Farm Loan Act of 1916 was designed to provide a wider market for long-term farm loans, thus reducing the cost of borrowing and tending to lessen the disparity between interest rates in different sections of the country. To accomplish this the organization of a system of Federal Land Banks and Joint-Stock Land Banks under the supervision of a Federal Farm Loan Board was authorized. These banks were to buy farm mortgages under careful restrictions and use them as security for bonds which were to be sold to the public. As the bonds were considered a safe investment and were granted the special privilege of exemption from taxation, except inheritance taxes, they were expected to appeal to a large group of investors. During the period of the war, when there was an unusual demand for capital, the Federal government extended financial assistance to the system by subscribing to stock in the Federal land banks and making large purchases of bonds. Though some provisions of the law have checked the use of the system by farmers, the plan has undoubtedly helped to lower the costs and equalize the interest rates on long-term farm credits and to make the conditions of repayment easier.

Most of the developments just described have been concerned chiefly with providing the farmer with better facilities for obtaining long-time credits, mainly on the security of farm mortgages, and the greater portion

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of his borrowing necessitates such long-time loans. However, many farmers require also short-time loans to finance crops, carry livestock, or make minor improvements. Just after the war it was estimated that over \$1,600 million of such short-time loans were made each year; however, owing to renewals, the total outstanding at any one date was considerably greater. Generally these loans are secured by chattel mortgage, warehouse receipts, or personal notes with or without endorsement. Loans running for two or three months, which commercial banks preferred, were seldom long enough. The paper secured by farm products that could be rediscounted at the Federal reserve banks having to mature within six months was also unsatisfactory because the financing of many crops required a longer period. To meet this need Congress in 1923 passed an act establishing the Federal Intermediate Credit Banks and providing for National Agricultural Credit Associations, the function of these institutions being to handle farm credits running from six months to three years. The acute distress of the debt-burdened farm group after 1929 led to new legislation, mostly of an emergency character, which will be described subsequently.

In addition to this action on the part of the Federal government, many states and private organizations have sought to aid the farmers in securing better credit in recent years. A number of states have passed laws providing that certain state funds could be invested in farm loans and a few states have authorized the sale of state bonds the proceeds of which were to be lent to farmers. In other cases states have sought to favor farm mortgages, as by exempting them from taxation when they bore a low enough rate of interest; some legislation, such as that designed to delay foreclosure, has resulted only in harder terms for the borrower. In a few states cooperative credit unions have been authorized, but in spite of their great success in Europe, no appreciable development has taken place in this country. The farmers' use of store credit is very extensive, especially in the South, and of course dates back to the earliest days. Where large use is made of this form of credit, crop mortgages are often required as security, notably in the cotton belt; but the prices charged for goods thus purchased are apt to be so high as to make this a form of credit much more expensive than that obtained from the banks.

The growth of farm mortgages previously noted was partly owing to better opportunities for obtaining credit, but chiefly to the abnormal rise in land values and prices, and the financial difficulties that beset agriculture in the reaction beginning in 1920. The results have led to statements that the farmer has really been able to obtain credit too easily. In a certain sense this was doubtless true of the situation during the period of inflation. Had greater caution been exercised by lenders in extending loans, in view of the practical certainty of a subsequent

reaction, the inflation of land values would have been less acute. Much the same could be said of other lines of economic activity. It is no more desirable that credit be recklessly extended to farmers than to any other group; but this does not mean that it is not desirable that such credit as is extended to them should be available on reasonable terms. To the extent that the developments just described have helped to counteract certain conditions that placed farmers at a disadvantage in borrowing as compared with other groups, these developments have been beneficial. But it is sometimes asserted that the actions of the Federal government and of some states have gone further and resulted in giving farmers an actual advantage artificially created. Although in many cases it would be very difficult to determine whether, in view of all circumstances, such legislation could be said to discriminate in favor of farmers, it is obvious that such a result is possible. Whether such action is justifiable depends on broad questions of social policy and the significance of agriculture in relation to that policy.

Agricultural Laborers. The problem of securing an adequate supply of hired labor has always presented difficulties for the farmer who attempted to operate on a scale that required more labor than his own family provided. Though the widespread introduction of many labor-saving machines has done much to reduce the amount of labor required, the problem is still a serious one. The sources from which the farmer can draw hired labor are limited for, in the main, it comes from those who have been brought up in rural districts, usually on the farm. This supply is constantly being depleted as the rural population is drawn off into other pursuits. Work as a hired hand on a farm appears not to offer great attractions for most. Though on the farm the relations between employer and employee are more personal, their relative bargaining power less unequal, the environment generally healthful, and the work itself less monotonous than many jobs, it requires much physical exertion, the hours are long, the prospect of advancement is slight, and it often involves living under conditions that shut the worker off from the attractions and opportunities of more populous places.

Out of the total of more than 10,400,000 people reported by the Census of 1930 as engaged in agriculture about 2,700,000 were hired workers. About two-fifths of the farms reported an outlay for hired labor, the total of which was less than \$1 billion, or an average of \$360 per farm reporting such outlay.

In many cases working for wages on a farm is simply regarded as a preliminary step to accumulating enough capital so that the worker can start farming on his own account, perhaps first as a tenant and then as an owner. In addition to the native population, immigrants have provided some farm labor, though the proportion entering this work is small in

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comparison with the proportion of those who were engaged in agriculture in their home country. In proportion to their number among the total gainfully employed the Negro population contributes the largest percentage of those engaged in agriculture, the native whites of native parents come next, then the native-born of foreign parentage, and the foreign-born whites stand last.

The marked seasonal fluctuation in the demand for farm labor increases the difficulties in securing the needed supply. In some regions this situation is met by drawing upon those in the immediate locality who are not regularly employed, especially women and children. In the Middle and Far West there developed a group that migrated from south to north as the harvesting seasons for the main crops succeeded one another. In recent years as better machine methods for harvesting certain crops, chiefly wheat, were introduced this group has become much smaller. A recent estimate places the number at between 200,000 and 300,000 who are chiefly employed in the cotton, fruit, and vegetable sections of the South, the beet-sugar regions and the fruit and vegetable sections of the Pacific coast. Pay is low and the laborers lead a precarious existence.

The Financial Risks of the Farmer. Farming, like every other economic activity, faces financial risks that arise from a great variety of causes and so stands to gain from changes that help either to reduce the risks or to provide for distributing any losses among a large number of people. There are many ways by which progress along these lines has been furthered during this period. All the advances in the use of more scientific methods, such as soil analysis, seed selection, better control over plant and animal diseases, have greatly helped to reduce possible losses by giving the farmer a better knowledge of how to cooperate with nature. The activities of the weather bureau sometimes enable him to decrease possible losses. Improved facilities for securing information as to present and prospective market conditions have enabled him to decide more intelligently what products to raise and when to market them to the best advantage. The facilities for hedging provided by the produce exchanges make it possible for him to shift the risks incident to price fluctuations. The development of various new forms of insurance for crops and livestock and the spread of farmers' mutual fire-insurance companies have afforded safeguards against crushing losses from other causes. Finally, better business methods in general, such as more common efforts to keep accounts and determine costs, have provided a more accurate basis for guidance in reducing possible losses.

Tenant Farming and Its Problems. The marked increase in the number and percentage of farms operated by tenants which characterized the period since 1860 has given rise to much discussion and some alarm as

marking a departure from the time when most farmers owned the land that they worked—a situation that had always characterized American agriculture and was regarded as one of its most desirable features. Though no figures are available before 1880, when the Census indicated that 25 per cent of the farms were run by tenants, it is certain that this represents a considerable increase over the percentage for 1860, since the abolition of slavery was followed by a great growth in tenant farming in the South. From 1880 to 1900, when the proportion of tenant farms rose to 35 per cent, the shift was rapid; since then the increase has been moderate, the figure for 1935 being 42 per cent. The acreage thus operated made up 31 per cent of the total farm acreage.

That the causes for this growth of tenancy are varied is suggested by the marked differences in the extent of tenancy in different sections of the country. In 1935, in the South, 51 per cent of the farms were operated by tenants, over two-fifths of these being croppers; in the West North Central states over 42 per cent; in the East North Central 29 per cent; in the Middle Atlantic states 16 per cent; in the Far West about 24 per cent; and in New England 8 per cent. Certain types of products appear better adapted for the forms of tenancy that prevail in this country than others. Thus, the highest percentage of tenancy is found among farms whose chief products are cash crops involving a small investment in working capital and providing a relatively rapid turnover, such as cotton, tobacco, rice, grain, and vegetables. Tenancy is much less common among farms devoted to fruits, livestock, and dairy products, where the investment is larger and it takes longer to realize upon it.

In the South in addition to the influence of the great cash crop, cotton, tenancy has developed chiefly because it seemed to afford the best means for securing the labor of the colored population. The abolition of slavery made the type of farm organization prevailing under the great plantation system unworkable; farms were split up and the colored population engaged in agriculture, generally lacking the capital to buy a farm, became tenants. Slightly less than a fifth of the colored farmers of the South fully own their farms. Tenancy is most common in the more fertile sections of the cotton belt, where the typical farm of about 40 acres can be worked by a single family. The prevalent cropper system with its close supervision makes the tenant's position very similar to that of a hired man, except as it offers an inducement to better work through a share in the crops produced. The combination of the conditions surrounding the Southern tenant class has resulted in one of the most backward and depressed groups in the country.

In the North Central states, which show the highest percentage of tenancy outside of the South and constitute a section where there has been a very marked increase since 1900, a somewhat different combina-

tion of circumstances explains the phenomenon. As in the South, the importance of annual cash crops is one factor; another is found in the rapid rise in the price of farm land and the very high value that it has attained as compared with nineteenth-century levels. The high cost of land makes it more difficult to buy a farm; the steady rise in land values up to 1920 tended to boost its price in anticipation of a further rise. Rents, being based on the present productivity of the land, did not rise proportionately so that immediately it was cheaper to rent than to buy. In all sections of the country the high price of land near the large cities suitable for market gardening has tended to increase tenancy. In California the state law prohibiting ownership of land by aliens has forced such cultivators to become tenants.

There are several rather marked contrasts between the tenancy of the South and that of the rest of the country. In the South the farms operated by tenants average much smaller in size than those operated by owners; in the rest of the country the situation is just the reverse. Typically the Southern tenant, particularly the cropper, is subject to much greater control of his farming operations by the owner than elsewhere. In the South tenants are much more likely to remain tenants all their life; elsewhere, tenancy is more frequently only one stage in the process leading up to ownership of a farm. In the main these divergencies are to be explained by the difference in the causes responsible for the growth of tenancy in each section.

The fears aroused over the growth of tenancy are based on various reasons. It is claimed that the tenant is interested only in getting as much as possible out of the farm in a short time. He is not concerned with the long-run development of the land and he has no adequate incentive to make permanent improvements, since these ultimately inure to the benefit of his landlord and seldom pay for themselves during his tenancy. It is also urged that he has less interest in furthering all phases of social development in the community since his stay there may be brief; the same may be true of his landlord if he lives elsewhere as an absentee. Finally, ownership of land instead of tenancy is said to create a greater sense of security such as all desire; by increasing an interest in the existing social order, it promotes stability.

On the other hand it is pointed out that, to a certain extent, these evils are not an inevitable result of tenancy, but rather of the particular form that tenancy may take. By making provisions for a longer term of tenancy, compensation to the tenant for improvements, and ensuring the general upkeep of the property, the likelihood of undesirable results can be greatly decreased. It must be admitted, however, that the actual practice in this country has fallen far short of such an ideal. Another claim is that where the tenant's operations are supervised by the landlord,

the result will be better methods and greater productivity, the assumption being that the owner is more experienced and intelligent. Doubtless this is correct in many cases, but it is far from being assured. Even if a net gain could be proved, other disadvantages would remain.

Finally, it is pointed out that tenancy in most parts of the country is only temporary and constitutes but one step in the so-called agricultural ladder leading to farm ownership; so it is desirable as an aid toward that goal. It may be admitted that since existing conditions are such that for many such a step is a necessary aid in attaining that goal, it is desirable that it should be available under adequately safeguarded terms. But this should not blind us to the unfortunate fact that such a step has so generally become necessary. It is possible, as some think, that the conditions are now somewhat stabilized and that tenancy will show little increase in the future. Yet it is nonetheless to be regretted that the time has passed when quick and easy advance to a position of freedom and independence was provided through the ownership of a farm. This long constituted one of the most desirable features of American agriculture.

Changes Affecting Rural Life. In addition to the developments of particular importance for their effect upon the economic organization of agriculture, there were various changes during this period which, while not without economic significance, were especially important for their effect upon the conditions surrounding rural life, notably its attendant isolation. The spread of rural free delivery and the parcel post system have given the farmer easier and quicker connections with the outside world and the same is true of the growth of rural telephone lines. The 1930 census indicates that a third of all farms had telephone connections. Still more recently the introduction of the radio has established another link with the outside world. In some sections the rural or interurban electric road has furnished a valuable connection. Of far greater significance has been the widespread rise of the automobile, 58 per cent of the farms possessing one or more cars in 1930. Although the extension of electric transmission lines has put new light and power at the service of many rural districts, only a sixth of the farms have any electricity and a quarter of these have to rely on their own plant. Marked progress has been made in improving rural schools, and better transportation facilities have made it possible for many farmers' children to attend the schools in urban centers.

These developments, which are far less generally available in the South than elsewhere, are only some of the more important among those that might be mentioned, but they are of especial significance in tending to break down the barriers that have helped to isolate the rural population from the rest of the world. Through establishing closer contacts with the rest of civilization they promote progress, help to overcome one

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of the chief disadvantages of rural life, and make living on the farm more attractive.

With this background of the more general developments affecting the economic and social organization of agriculture in mind, we can now turn to the history of agriculture in the shaping of which these developments were so important. We shall take up first the general course of events and subsequently the particular developments in different sections of the country.

CHAPTER XXXII

AGRICULTURE SINCE 1860.—(*Continued*)

OTHER EXTRACTIVE INDUSTRIES

The Progress of Agriculture in General. The progress of agriculture from decade to decade was considerably affected by conditions determining the general prosperity of the farmer. After the Civil War, in spite of declining prices, expansion proceeded at a rapid pace stimulated by the construction of railroads opening up Western land. The panic of 1873 was followed by a long period of depression and a further decline of agricultural prices, which, though partly offset by lower freight rates, entailed widespread suffering among the farmers of the West. In spite of this, the output of farm products continued to grow at a rather rapid pace—a fact that undoubtedly aggravated the farmers' difficulties at the time. Beginning about 1878 conditions improved and the decade of the eighties was a fairly prosperous one. Stimulated by unprecedented railroad building and the prospective disappearance of the free, fertile public lands, the farming area was rapidly extended and by 1890 was 50 per cent larger than in 1860. At this time many pioneers ventured into the semiarid sections with little knowledge of the difficulties that would there beset them. The rapid increase in production accentuated the downward trend in the general price level and, after the panic of 1893 broke over the country and prices dropped to the lowest point in half a century, the farmers found themselves in a desperate plight, the worst that they had encountered since the early forties. As a result the decade of the nineties showed the least growth of any decade since the Civil War.

Commencing about 1897 the situation began to improve and from then until 1920 the agriculture of the country enjoyed a prolonged period of general prosperity probably unequaled theretofore, though the periods from 1793–1817 and 1845–1865 might approach it in this respect. The general price level steadily rose, but farm products advanced still more rapidly. The supply of good free land being practically exhausted, the depressing effect of its competition ceased to be appreciable except as other countries were opened up. Finally, came the first World War, which created an abnormal demand for nearly all the great agricultural staples of this country and brought with it a sudden advance in the general price level. In the peak year, 1919, the gross income from farm products was nearly \$17 billion which was 150 per cent above the 1910–1914 average.

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The exports for 1919 were about a fifth of this value and about 45 per cent above the prewar level in volume.

The effects of this period are best illustrated by the advance in land values. In 1850 the average value of land and buildings per acre of farm land had been over \$11; but more than 50 years were to pass before this figure was doubled, the average value in 1900 being less than \$20 an acre. Then, within a single decade, the average value doubled; between 1910 and 1920 there was another increase of about 75 per cent, which brought the figure to nearly \$70 an acre in 1920. The value shown at the 1920 census, actually for January, 1920, reflected the situation at the peak of the speculative boom engendered by the war. Farmers, unmindful of the experience after the Civil War, had bid up the price of land in the most reckless manner in the effort to expand their holdings, and often borrowed heavily to do so; this was facilitated by the various agricultural credit measures of the preceding years. The result was an enormous increase in the outstanding volume of farm debt; the mortgage debt alone rose from about \$3.3 billion before the war to \$7.8 billion in 1921. This increase, moreover, had been based on a highly inflated price level.

The Decade of the 1920's. This decade in the history of agriculture must be considered as providing the preliminary setting leading up to what seems likely to be a new era in this pursuit, starting in 1933. The abnormal prosperity of American agriculture during the preceding quarter century had been founded (1) on the disappearance of free fertile land combined with an expanding domestic market and (2) on the stimulus of a rapid advance in the general price level. Climaxed by the war boom, it was to be expected that it would be followed by an extreme reaction on the return of peace. The postwar boom and continued foreign demand staved this off until the precipitate drop in prices of 1920-1921. The prices of agricultural products fell more than the prices of most other commodities and, though they soon recovered somewhat, they continued at a level relatively lower than that maintained for commodities which the farmer bought as compared with prewar years. This was chiefly owing to the fact that the farm output quickly recovered its first losses and, aided by an unusual rate of technological advance, soon exceeded the wartime level.

Another factor, chiefly affecting the great staples cotton, wheat, corn, beef, and pork, was the steady dwindling of the export market, though the volume of exports remained above the prewar level till about the close of the decade. There was also some decline in the domestic per capita consumption of meat and grain. This unfavorable market situation was made much more serious for the farmer by the heavy burden of debt incurred during the preceding period of high prices and by his rapidly mounting taxes.

The widespread difficulties of the farmers during this decade led to growing demands for relief in various forms. First, there was the customary appeal for higher tariff duties on farm products which was met by a wholesale advance in such duties to an unprecedented level in the tariff acts of 1921, 1922, and 1930. Obviously this advance could be of no benefit to the export staples; and, since it was accompanied by increases in many other duties as well, the net result, in the opinion of a subsequent Secretary of Agriculture, "did harm to agriculture." In 1923 additional credit facilities were provided. Both the Federal and the state governments sought to aid cooperative marketing associations and in 1922 they were exempted from the prohibitions of the antitrust laws.

Later, efforts of most of the farm groups were directed towards some measure that would enable them by a form of subsidy to sell their export surplus at lower prices than could be secured from sales for domestic consumption. Vetoes by the President in both 1927 and 1928 blocked such action. As some measure of compensation the Agricultural Marketing Act of 1929 created the Federal Farm Board with a revolving fund of \$500 million to be used to stabilize prices. In a futile effort to do this during the next three years most of the fund was used to buy up cotton and wheat, which eventually had to be sold at a loss or given away, and the government lost nearly three-fourths of the fund in consequence.

When, after this trying decade for agriculture, the depression of 1929 broke over the country and the prices of farm products took another headlong dive so that for 1932 they were at a level less than half that which prevailed from 1923 to 1929 and a third below the prewar level, the situation of the farmers became desperate indeed. For that year the gross income from farm production dropped to \$5.3 billion as compared with an average of over \$11 billion for 1923-1929, and the Secretary of Agriculture declared that the average farmer after paying taxes, interest, and his costs of production had nothing left as a return on his investment and management. A simultaneous decided slump in the volume of agricultural exports only aggravated the difficulties of the situation. To the renewed and more insistent demands for relief that then arose, the new administration, which came into power in 1933, responded to an extent unparalleled in our history. The consequences thereof seem likely to mark the beginning of a veritable New Deal for the farmer and a new era for agriculture.

Aid for Agriculture in the Depression. In working out a program for agricultural legislation in the following years it was clear that the first thing to be done was to secure an immediate increase in the farmer's cash income, both to relieve real distress and to stave off impending bankruptcies and loss of farms. Attention was first centered upon helping the producers of the great staples. Then the producers of all the minor

products began to demand aid, and soon the program was extended to include practically every farm in one way or another. Even after conditions showed a marked improvement, as they soon did to such an extent that, early in 1937, the purchasing-power parity objective was almost reached, an immediate increase in the prices of their various products and their cash income continued to be the main and almost the only demand of the representatives of the different farm groups that swarmed to Washington. The Senate which, because of its state basis of representation, has now become the political stronghold of the agricultural interests provided in its agricultural bloc a vigorous support. Some of the most serious and, for the taxpayer and the consumer, the most costly mistakes made were a product of this shortsighted and narrow policy.

Under the leadership of Secretary Wallace in the Department of Agriculture, which certainly could not be charged with neglecting the interests of the farmer, somewhat broader and more far-sighted views were to be found. As soon as the first crisis had passed, this administrative group sought to exercise such influence as it could over legislation to secure measures designed to promote what was considered a broader, long-run program for the improvement of agriculture. Thus in the mass of legislation that emerged by 1938, which also embodied much learned from sad experience during the intervening years, there were to be found, in addition to the dominant purpose to increase the farmer's cash income, provisions to promote soil conservation, better methods of farming, ever-normal granaries, and particularly care for the inarticulate, more depressed farm groups previously largely ignored.

The first comprehensive measure of this program was the Agricultural Adjustment Act of May, 1933, under which the Agricultural Adjustment Administration (the AAA) was set up. One group of its provisions, later supplemented by other laws, was designed to provide immediate help to the debt-burdened farmer by extending loans on easy terms. This credit also was used to help carry over a portion of the unusually large surplus of various products that threatened to break market prices. To serve the same end the government bought up large quantities of certain products. Another clause of the act authorized various measures for inflating the currency with the objective of raising the general price level and decreasing the gold content of the dollar. The chief means for raising agricultural prices and giving the farmer a larger cash income were supplied by another elaborate group of provisions. To secure a reduction in the output of certain basic commodities, the government offered benefit payments to those farmers who would enter into voluntary agreements to cut their production. To provide money for this a tax was levied on those engaged in processing these products. The original list of basic commodities included wheat, cotton, corn, rice, tobacco, hogs, and milk and its prod-

ucts; but subsequent legislation added a number of others including beet and cane sugar, cattle, and potatoes.

For the purpose of securing a more orderly marketing of the existing and prospective supplies, the Secretary of Agriculture was also authorized to arrange marketing agreements which could be used to limit the supplies sold, fix prices, and promote fair-trade practices under a licensing system. These agreements were exempted from the prohibitions of the antitrust laws. The price level for basic commodities which this act sought to establish was that which would give them the same purchasing power over commodities that the farmer bought as had existed in the prewar years 1910-1914 (for tobacco, 1919-1929). The choice of this prewar purchasing-power parity base, it may be noted, was distinctly favorable to agriculture, for those years fell in a period during which the prices of farm products had been rising more rapidly than the general level of prices.

With powers strengthened by other laws that experience showed necessary, the AAA operated for three seasons till a Supreme Court decision in January, 1936, invalidated the crop-restriction and processing tax provisions and led to a demand for new legislation to replace this loss of powers. By this time, however, the agricultural situation had greatly improved. Thanks to a disastrous drought in 1934, said to be the worst since before 1860, and a poor year in 1935, the great surplus stocks that overhung the market had mostly been removed, except in the case of cotton and some grades of tobacco.

The price of farm products in 1935 averaged 66 per cent above that in 1932 and 8 per cent above the prewar level; in purchasing-power parity they fell about 15 per cent below that level. The farmers' gross income from production for that year was \$8 billion, contrasted with \$5.3 billion in 1932, and was supplemented by half a billion in rental and benefit payments from the government. The government's outlay during these years had been over \$1.7 billion of which something less than half had been obtained from the processing taxes. Meanwhile the burden of farm debt had been substantially reduced and much of that still outstanding had been refunded on easier terms. Thus when it came to framing new legislation the problem of immediate farm relief was less urgent and more consideration of a long-run agricultural policy was possible.

The most important of the laws then passed to meet the new situation was the Soil Conservation and Domestic Allotment Act of February, 1936. The farmer's interest in this measure was based on the possibilities it afforded for restricting output and securing large benefit payments rather than in the stated conservation objectives, which were looked upon more as a protective guise to enable the act to pass the scrutiny of the courts. The government also saw in this a device for paying the

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farmers to do what it had been rather vainly trying to educate them to do for a long time. Under this act farmers were to be given benefit payments for decreasing their planting of soil-depleting crops and increasing their planting of soil-building crops, such as the legumes and grasses or trees, or for using methods of cultivation that check soil erosion. Since this program was not confined to the basic staples, it could be applied to most farms and so made a wide appeal. Appropriations up to \$500 million a year were authorized for use in benefit payments. Instead of parity prices which, it may be noted, had almost been attained, it was now said that this led the farmer to overstress price and disregard volume of production and also ignored changes in costs of production; so this law sought to establish the per-capita, prewar, parity, net income purchasing power of the farming as compared with the nonfarming groups. During 1937 some 3 million farms, including 65 per cent of the total crop acreage, were operated under this program resulting in a diversion of over 26 million acres from soil-depleting crops as well as other improvements in methods of cultivation. Some \$300 million in benefit payments were earned thereby.

In 1936, following the invalidation of the production-restrictive measures of the AAA, a general move to increase the acreage planted seemed to threaten greater crops. This outcome was prevented by another drought nearly as bad as that of 1934, which necessitated various modifications in the program for the year and more relief for the areas most hard hit, like the Dust Bowl of the plains. The resulting rise in the prices of farm products brought the level to within 8 per cent of the prewar parity, and the gross cash income of the farmers, including government payments, was \$1 billion above that for 1935. The year 1937 with generally favorable weather brought unusually high crop yields and output, despite some reduction in acreage. The cotton crop of almost 19 million bales was the largest on record and 40 per cent above what had been planned for; the wheat, corn, tobacco, and sugar crops were all above normal. On top of this prospect of new surplus stocks came a general business reaction; prices dropped and led to a decided reduction in farm income. The difficulties met with in the efforts to secure the desired adjustment of production and prices which the experience of these years illustrated were an important factor in shaping the legislation of 1938. Another factor was a shift in the personnel of the Supreme Court which created hopes of a more tolerant attitude on the part of that court toward this type of legislation.

The Agricultural Adjustment Act of February, 1938, was a comprehensive measure which sought to provide for a long-run agricultural program involving considerable expansion in the scope of the government's powers and a more effective coordination of its manifold activities in this

field. (1) It continued and strengthened the main provisions of the Soil Conservation Act of 1936, increased their flexibility, and sought to secure an equitable division of the funds granted among the landlords, tenants, and croppers, besides limiting individual's payments to \$10,000. (2) The commercial producers of wheat, corn, cotton, tobacco, and rice who kept within an allotment calculated to produce a normal supply for domestic use or export and who observed approved soil conservation practices were, as appropriations were made, to receive additional benefit payments to help restore the prewar parity prices of these products. (3) Since unforeseen or uncontrollable factors might still result in improperly adjusted supplies, there was included an elaborate set of provisions designed, in case of need, to regulate the flow of products to the market so as to promote the maintenance of normal supplies—the so-called “ever-normal granary.” This purpose was to be secured by loans from the Commodity Credit Corporation whenever the supply of wheat, corn, or cotton exceeded a certain norm or the price fell below a certain percentage of parity and the producers had voted to adopt marketing quotas, thus providing the means for holding surplus stock off the market. Loans on any other agricultural commodity on approved terms were also authorized. Supplementing this was the authority vested in the Secretary of Agriculture to fix individual marketing quotas for any of the five staples, which, if accepted by a two-thirds vote of the producers affected, were to become operative through the issue of an order applicable to all producers. All sales in excess of the quotas were to be subject to a heavy penalty tax. In the case of wheat growers additional protection was provided by creating the Federal Crop Insurance Corporation to insure them against most of the unavoidable losses arising from drought, flood, insects, or plant diseases.

Comprehensive as this 1938 act was, despite the particular care shown for the five staples whose export market problems were so serious, it complemented some already existing legislation of a similar character that was important for many other farm products. The original rather sketchy marketing agreement and licensing provisions of the law of 1933 had subsequently been replaced in 1935 and 1937 by special marketing acts with much more detailed provisions rather similar in general character to those adopted for the five staples in the act of 1938. The general crop agreements and orders thus authorized were particularly designed for, and chiefly used in, controlling the marketing of fruits, vegetables, and milk and their products (with minor exceptions), mostly very perishable commodities that were often shipped a considerable distance and had a highly localized and specialized production. The initiative in securing these agreements was left largely to the producers' marketing organizations. The duration and success of the agreements under these laws varied con-

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siderably, the greatest difficulties arising in the case of milk; in 1938, 300,000 fruit and vegetable growers and 1,200,000 milk producers were operating under them.

In the case of sugar, where the beet and cane growers faced the competition of large imports from the insular possessions and Cuba, special laws introduced a supplementary restrictive device in the form of the quota system which set definite limits on the quantity of sugar that could be imported from each source outside continental United States. The doubling of the effective duty on foreign sugar between 1921 and 1930 to over 2 cents a pound had greatly stimulated production in the insular possessions, whose sugar was admitted free; the imports from these sources had mounted rapidly till, by 1932, they provided nearly half of the domestic consumption. Although this increase had been entirely at the expense of the Cuban product, it had prevented the domestic output, which provided a fifth of the consumption 1923-1932, from increasing as much as had been hoped from the higher duties. Consequently, when the Sugar Act of 1934, along with other restrictive provisions, adopted the quota system, advantage was taken of the opportunity to ensure the domestic growers a substantial increase in their share of the domestic consumption and to reduce that of the insular possessions.

As slightly altered by the Sugar Act of 1937, the quota of domestic producers was fixed at almost 30 per cent, or about 50 per cent more than they had supplied in the decade before 1933. The quota of the insular possessions was limited to 41.5 per cent, but the island growers, except in the Philippines, got some compensation by being included in the benefit payments of this act. The foreign quota, which practically meant only Cuba, was fixed at 29 per cent, a bit higher than just before the quota system was introduced, but barely half the proportion obtained from this source before 1929. Meanwhile, however, a trade agreement of 1934 had cut the duty on Cuban sugar about one-half.

Obviously this quota system was the purest sort of protectionist measure and certainly not one calculated to promote soil conservation. Nonetheless the act of 1937 also took over the program of the Soil Conservation Act for sugar and in addition provided for conditional payments to growers for which purpose up to \$55 million a year could be appropriated, and an excise tax of about $\frac{1}{2}$ cent a pound on raw sugar was imposed on refiners to help cover this outlay. To qualify for payments, the producer must practice soil conservation, limit the crop he marketed to his quota, and, since it was felt the benefits of previous measures had chiefly fallen to a small group in which processors were prominent, he must also eliminate specified child labor, pay fair and reasonable wages, and, if also a processor, pay a fair price for the sugar cane or beets he bought. When one remembers that, in addition to such measures, there was a high pro-

tective duty on sugar and that the total farm value of the domestic beet and cane crops used for sugar averaged only about \$65 million for the years 1923-1929, he may well wonder at what the consumer must pay to sustain this remarkably powerful producing group.

Although the effort to raise and stabilize the prices of farm products through the activities of the AAA was the main objective of the government's agricultural relief program, at least two other groups of measures should be noted, one dealing with aid to those heavily burdened with debt and the other seeking to assist certain classes that were particularly depressed. The demand of the debtor farm group for relief and assistance was similar to that which had always appeared under like conditions throughout the country's history. Since an act of 1934 limiting foreclosure rights of mortgage holders had been declared unconstitutional, it was replaced in 1935 by one establishing a three-year moratorium. In addition extensive provision was made for extending Federal loans to farmers on easy terms, chiefly through the Federal Farm Mortgage Corporation set up under an act of 1934. This not only enabled many farmers to carry on till the return of better times made possible the repayment of their debts but also considerably lightened the burden of those still remaining in debt. By the beginning of 1938 the farm mortgage debt had been reduced to \$7 billion or over \$2 billion below the figure for 1930; short-term debt had also been cut. At the same time many of the holders of this debt were relieved of their difficulties by shifting the burden of carrying it to the shoulders of the government.

Among the group of measures designed to aid the most depressed classes of farmers were the elaborate, but none too carefully considered, plans to shift submarginal farmers to sections where subsistence homesteads or semirural villages could be developed. What in 1935 became the Resettlement Administration undertook a series of such experimental projects. The Farm Security Administration, created in 1937 with power to provide financial aid and technical guidance, carried on these and similar endeavors as well as offering assistance to a far larger number of individual families where no community organization was involved. Experience had shown that the degree of control required for the success of such organizations was repugnant to the ingrained desire for freedom of action so typical of American farmers. Additional aid designed to help the tenant class to acquire ownership of land was provided through the Farm Tenant Act of 1937. Loans for the extension of rural electrification service were authorized in 1936.

General comment on the agricultural program of these years can be postponed to the chapter dealing with the period of the depression as a whole. It will suffice here to suggest the significance of this period in the general history of our agricultural development. (1) This program pro-

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vided the means for helping agriculture to meet the final and most difficult readjustments after a quarter century of marked prosperity culminated in the wartime speculative boom. Hit by one of the most severe reactions, if not the worst, in history under conditions that made the effects far more serious than ever before, because of the heavy volume of debt, the more specialized form of farm equipment, and the more completely commercialized character of agricultural operations, it was certain that such a reaction would cause more serious and widespread distress than the farming class had ever experienced before.

This reaction happened to come just about the period when the prospect for a long time steady rise in the value of farm land was greatly diminished, if not obliterated, except as it might originate from monetary inflation. From colonial times American farmers as a whole, but especially those in the new or the most fertile regions, since the trend was by no means universal, had been able to count upon an increase in the value of their land to provide a substantial element in their long-run returns from farming. After about 1920 this prospect seemed likely to vanish as the continued expansion of the domestic market was severely checked by the declining rate of population growth (despite possibilities for greater consumption among the large undernourished group) and the foreign markets were increasingly reduced by both the competition of newly opened fertile land in less developed countries and the efforts of older countries to attain greater self-sufficiency. Facing such an outlook American farmers could no longer count on such rapid expansion of markets with the accompanying rise in the value of farm land as had prevailed theretofore.

This changing situation also made it more important for the farmers, especially those producing for the export market, to pay more attention to soil conservation and to consider soil-depletion cost, since there was little chance that this would be offset by rising land value. Thus both the severity of the depression and the problems of readjustment involved were made the greater because the postwar reaction came just at a period in the general history of agricultural development when other changes were increasing the farmers' difficulties. Whatever the reaction of the agricultural program on the rest of the national economy and despite various obvious mistakes, it did serve the purpose of greatly mitigating the farmers' distress during this period of readjustment.

(2) It is clear that the measures adopted left American agriculture on a far more artificial basis of legislative support, as regards both domestic and foreign markets, than ever before; it is a more precarious basis and one which, in certain respects, is economically less sound fundamentally. Also, it is one of greater dependence on the domestic market and one that reflects a shift towards a self-sufficing autarchy with great reliance for success on wise administrations. (3) The upheaval

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and distress of the period helped to focus some attention upon certain problems of agriculture and to provide the impetus and the favorable setting that led to legislation directed towards promoting various long-time reforms, though with what permanent success still remains to be seen. Here also, much depends on wise administration.

Indices of Agriculture's Growth. Although there is no one index available that provides a satisfactory measure of the growth of agricul-

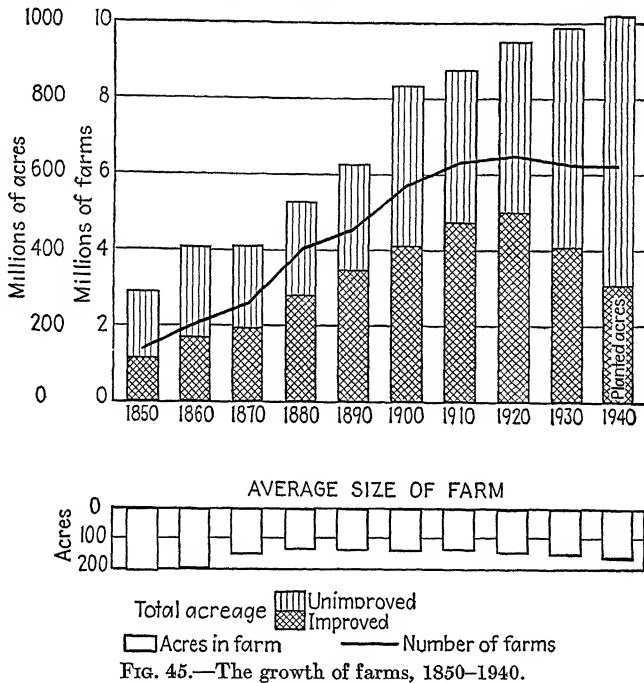


FIG. 45.—The growth of farms, 1850-1940.

ture in general, there are various ones that are useful as suggestive of the general trend of growth. Among these are the census returns covering the number of farms and the farm acreage, shown on the graph on this page. Though the figures for different years are not always strictly comparable, the error is slight, except for 1870, when the census returns, especially in the South, were undoubtedly incomplete and so minimize the apparent growth during the sixties and exaggerate that of the seventies. The total farm acreage more than doubled between 1860 and 1920, rising from 407 million to 956 million acres; by 1940 another 100 million had been added. The area of improved farm land showed a much more rapid rate of growth rising from 163 million in 1860 to 503 million acres in 1920; since then there has been some decline.

However, this increase did not quite keep pace with the growth of population, for the area of improved farm land per capita fell from 5.12

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acres in 1860 to 4.04 acres in 1935. The percentage of the total farm land that was improved rose from 40 per cent in 1860 to over 57 per cent in 1890, but was not quite 50 per cent in 1935. This drop is chiefly to be explained by the enormous addition to the unimproved farm land, especially after about 1890, when large tracts of the public domain, mostly grazing land, were taken up by individuals to protect themselves, since the public

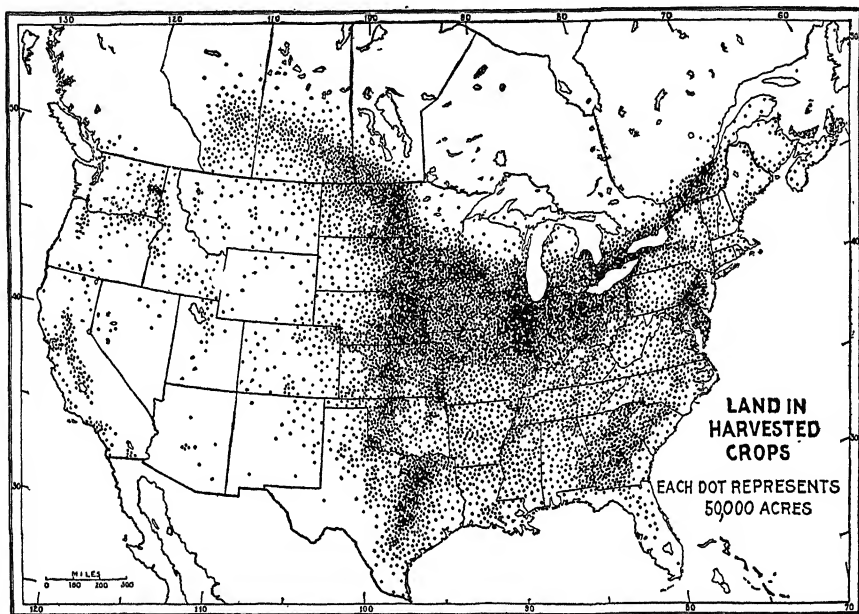


FIG. 46.—Land in harvested crops. (Reproduced from R. H. Whitbeck and V. C. Finch, *"Economic Geography."*)

grazing lands had become overstocked. In 1860 about one-fifth of the total land area of the country was in farms and in 1935 over one-half. It is important to note that of the increase in the total farm area that took place between 1860 and 1920 only about 35 million acres, or less than one-twelfth of the total, were in the states east of the Mississippi River. In other words, the opening up of the West was the great factor in the expansion of agriculture during this period.

Besides the growth of the farming area there are other figures suggestive of the general expansion of agriculture. The value of all farm property rose from nearly \$8 billion in 1860 to over \$20 billion in 1900 and \$78 billion in 1920, but fell to \$57 billion in 1930. The average value of all farm property per farm fluctuated about \$3,500 between 1860 and 1900 but rose to \$12,000 in 1920; however, the marked rise in land values and prices after 1900 must not be overlooked in connection with these figures. By 1930 it had dropped to \$9,000, and by 1935 below \$6,000. The total

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number of persons engaged in agricultural pursuits rose from 5,900,000 in 1870 to over 12,600,000 in 1910 and then fell to less than 10,500,000 in 1930, a decline partly owing to changes in census methods of enumeration. It is important to note, however, that in spite of this increase in the absolute number of those engaged in farming there was a steady decline in the proportion of the total population gainfully employed that made up this group. In 1860 those engaged in agriculture made up about three-fifths of the total gainfully employed population; by 1910 the proportion had fallen to one-third, and in 1930 it was little more than one-fifth. The growth in the total quantity of agricultural products is difficult to measure, but an estimate made by Dr. King indicates that the quantity had somewhat more than doubled between 1860 and 1890 and again more than doubled between 1890 and 1910. The output in normal years since the first World War shows a moderate gain over the prewar level.

Satisfactory figures showing the growth in the value of agricultural products during this period are not available. The census figures that do exist are not strictly comparable and, of course, in part reflect changes in the general price level and involve some duplication. Nonetheless they are suggestive and for certain comparisons useful. The gross value of farm products given by the Census for 1879 was \$2.2 billion; by 1899 the figure was more than doubled; in 1909 it had risen to over \$8.5 billion. Shifting at this date to the Department of Agriculture's estimates of gross income from farm production,¹ which are more satisfactory in eliminating duplications, we find that the total for 1909 was \$6.2 billion and then rose to a peak of practically \$17 billion in 1919, only to drop to around \$11 billion in the years from 1923 to 1929. Since considerable quantities of certain crops are fed to livestock and there are resales of livestock, the total gross value in these census figures involves considerable duplication. When allowance is made for this duplication so as to estimate the net contribution that agriculture makes to the national income, it would appear that during this period, some time before 1890, agriculture ceased to be the most important general branch among the economic activities of the country.

It was surpassed by manufacturing, which has since greatly increased the lead then obtained. At the Census of 1920 manufacturing also surpassed agriculture in the number of individuals gainfully employed. Thus in spite of the marked growth of agriculture, this period brings a great decline in its relative importance in the economic life of the nation. The country is no longer primarily a nation of farmers. This means a change of far-reaching significance in the economic, political, and social life of the people. (See the charts on pages 726 and 1064.)

¹ This represents the value of farm products sold plus the value retained for use on the home farm but excluding that retained for feed or seed and that unfit for use.

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The Growth of the Leading Crops. Throughout this period corn held its position as much the most important and valuable agricultural crop of the country. Its most rapid increase occurred between the close of the Civil War and the end of the century, chiefly in the great corn belt extending from Ohio to the Missouri River, where it was closely associated with the growth of livestock raising. The increase in the crop during this period was over 150 per cent; during the next two decades its growth was at a much slower rate, showing an increase of approximately 20 per cent and bringing the average crop for the five years centering in 1920 to 2.7 billion bushels. Since then the average has shown a moderate decline.

Though very frequently overlooked, the hay and forage crop—much below corn in value—has often been the second most valuable agricultural crop. Up to about 1900 it increased at about the same rate as corn; after that date its rate of growth was much more rapid. The average tame hay crop for the five-year period centering in 1920, 74,000,000 tons, represents an increase of over 40 per cent since 1900, though there has been a decline since. As there has been an appreciable increase, about one-fifth, in the yield per acre since the Civil War, the acreage devoted to this crop has not grown in proportion to the output.

From the close of the Civil War to 1880 the acreage and production of wheat practically doubled; then came a decade during which the crop remained stationary, followed by another period of rapid expansion during the nineties, so that by 1900 the crop was nearly three times that of about 1870. From then until 1914 the crop again remained nearly stationary, fluctuating around 700 million bushels. The wartime demand gave a new impetus so that the average crop for the five years centering in 1920 was nearly 900 million bushels. In the reaction that followed the return of peace, the wheat growers suffered severely, yet up to 1933 the decline in production was very moderate. Until the nineties the average yield of $12\frac{1}{2}$ bushels per acre showed little gain; since then it has risen to around 14 bushels, a figure still less than half that obtained in England by more intensive methods of cultivation.

The period as a whole is marked by considerable shifts in the main centers of production, the most noticeable being the tendency to concentrate in the region from Oklahoma northward to the Canadian border. After about 1880 there was a decline of the wheat crop in most states east of the Mississippi. In the Far West the California crop increased rapidly up to about 1890 and then declined; the output in eastern Washington and Oregon continued to grow; and the introduction of new varieties made possible some expansion in the Rocky Mountain region.

About equal in rank with the wheat crop in point of value is the cotton crop. Just after the Civil War this crop was barely half that raised

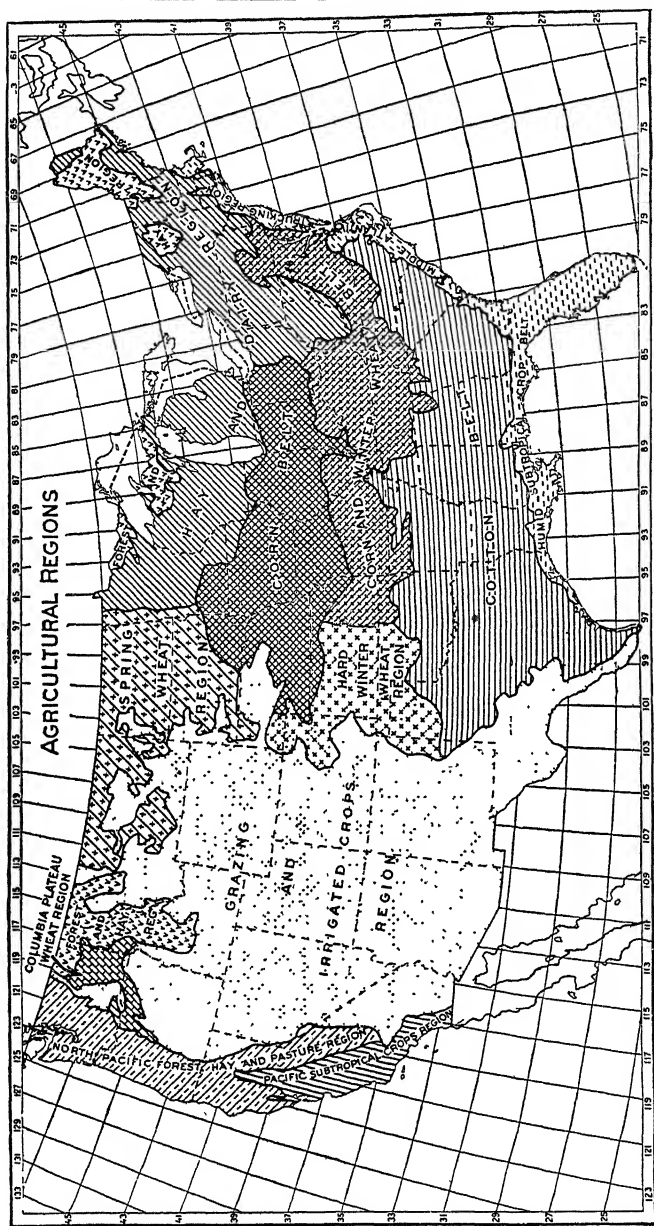


FIG. 47.—Agricultural regions. (U.S. Department of Agriculture)

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immediately before the war and it was not until the late seventies that the output returned to the prewar level. From then until 1914 there was a fairly steady growth and the crop of that year, over 16 million bales, was four times that of about 1860. Thereafter the ravages of the boll weevil combined with the postwar reaction somewhat reduced the average crop, though in 1926 a crop of nearly 18 million bales established a new record; even this was exceeded in 1937. With the development of the region beyond the Mississippi the center of production moved westward. By 1890 Texas had surpassed Mississippi as the leading cotton-growing state and now raises about one-quarter of the total crop. At the same time, however, up to 1920 there was a considerable increase in the output of the older cotton-growing states, owing to both increased acreage and better cultivation. Until about 1890 there was a decline in the average yield per acre, because of less intensive methods of cultivation in the newly opened sections of the West. Thereafter under better cultivation the yield increased somewhat. Recently, the growing of long-staple cotton has been introduced in the far Southwest, but the output is still only a small fraction of the total cotton crop.

The only other important cereal crop is that of oats. Although its value is much below that of wheat, the acreage devoted to it is about equal to that given to cotton. Between the late sixties and 1890 the crop almost tripled; from then, the growth was less rapid, rising to around 1 billion bushels by 1914. During the stimulus of the war period, the crop increased over one-third; since then it has lost a considerable portion of that gain. The most rapid increase in acreage occurred during the two decades after 1870. The yield per acre has shown very little improvement and still remains far below that of Great Britain or Germany. Most of the increase in the crop since 1860 has come from the region extending from northwestern Ohio to the Missouri River.

Although the five crops just described occupy nearly 90 per cent of the acreage devoted to all crops and make up about 80 per cent of their total value, some of the outstanding developments among the minor crops during this period deserve mention. The growth of the urban population has greatly stimulated market gardening in the adjacent regions, and better transportation facilities have enabled far-distant regions to raise these crops for market. The same developments have promoted the growing of fruits, notably in parts of the South and the Pacific coast states.

One of the most striking developments has been the growth of the beet-sugar production. Starting about 1870, the crop remained insignificant until after 1890; then, it increased by leaps and bounds and permanently surpassed the cane-sugar crop after 1905; since 1930 it has fluctuated around 1,300,000 tons or about four times the cane-sugar crop.

As a result the country now produces more than one quarter of the sugar it consumes and the insular possessions supply over two-fifths. In consequence we are relatively much less dependent upon foreign sources of supply, mainly Cuba, than formerly. Beet sugar is raised in a belt extending westward from Ohio and Michigan to the Pacific, but mainly in Colorado, California, Nebraska, and the northern Rocky Mountain states.

It was not until about 1880 that the tobacco crop regained the level of 1860, but by 1902 it had doubled and in the peak year of 1930 with a crop of 1,650,000,000 pounds it was almost four times that of 1860. Kentucky was far in the lead among the states until recently, but the greater relative growth in North Carolina has now given that state first rank. The Virginia crop has gained but little and the same is true of Tennessee. It is estimated that the United States raises about one-third of the world's production.

The production of rice, though relatively unimportant in value, has undergone striking changes during this period. Practically confined to South Carolina and Georgia in 1860, production there has almost ceased. The center of production is now in Louisiana, Texas, and Arkansas, the first-named state having taken the lead from South Carolina before 1890. A sudden expansion in California since 1912 has placed that state among the important producers. Even at the close of the century, the rice crop showed only a moderate increase over the level of 1860, but so rapid has been the growth since then that recent crops have averaged ten times that level. In consequence the United States after 1918, having been an importer of rice since 1861, began to export much more than it imported.

Barley is another one of the less important crops that has experienced a great relative growth, the crop in recent years being over seven times greater than that of about 1870. California, which had surpassed New York before 1860, has generally held first rank until recently; in New York production rapidly declined; but the chief growth has occurred in Wisconsin, Minnesota, and the Dakotas. The rye crop rose over 50 per cent between 1870 and 1905, then doubled during the decade 1915-1925, but has since lost much of this gain. Production, once centering in the Middle Atlantic states, has declined there and is now concentrated in the region from Michigan to North Dakota. Within the last decade the production of soy beans, centering in Illinois, has experienced a phenomenal increase. With the introduction of refrigerator cars and the adoption of better means for preserving and canning, the market for fruits and vegetables has greatly expanded and production correspondingly increased. In recent years vegetables have provided around a tenth of the gross income from farm production, potatoes yielding nearly half of this; fruits and nuts have provided around a fifteenth of the total.

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Animals and Animal Products. Outside of crops, animals and animal products constitute the only important group of agricultural products. During this period the numbers of the chief kinds of food animals showed a rapid increase, keeping pace with the growth of population up to around 1900. This was followed by a period when all but hogs, dairy cattle, and chickens either showed no enduring gain or declined, and no group except chickens came anywhere near keeping pace with the growth of population. Much the greatest decline—practically one-half since 1920—was in the number of horses. It is to be noted, however, that among other livestock there has generally been an improvement in quality that somewhat offsets the effects of the decline in quantity.

In the case of two groups, beef cattle and sheep, the growth in numbers was closely associated with the opening up of the vast grazing area of the plains and Rocky Mountain regions, which first became important in raising livestock after the Civil War. The expansion here was so rapid that before 1890 the great public grazing lands had become overstocked; this led to many a violent conflict among the ranchmen, and practically ended the period of growth. To protect themselves ranchmen secured title to the grazing land or to watering places that gave them practical control of such land; by more careful use of the range and raising more fodder, they have been able to maintain or somewhat increase the size of their herds. But conditions have proved more advantageous for cattle than for sheep, as the former have about held their own in the Far West since 1900, and the number of sheep had declined about two-fifths by 1920, though it shows an upward trend since which has almost restored the former peak.

The number of sheep in the country reached the highest point on record in 1884, a circumstance that was the product of two divergent tendencies in the East and the Far West. East of the Mississippi River sheep raising had been greatly stimulated during the Civil War; thereafter, the flocks of this region steadily dwindled, other products, especially those of the dairy, proving more profitable. The small flocks that still remain are chiefly a by-product of general farming and are kept with mutton and lamb rather than wool as the chief objective. Even in the Far West where, during the period of rapid expansion, wool was considered the chief objective, a similar shift toward mutton and lamb has long been evident. Raising sheep for wool is economically better suited for undeveloped or frontier regions. With the introduction of refrigerator steamships, keeping sheep for mutton and lamb shows a similar tendency in the face of the competition of other agricultural products that seek land nearer their place of consumption. The number of beef cattle reached the highest point in 1894; the subsequent decline was less marked than in the case of sheep and was mainly a product of the shift to dairy cattle,

chiefly to the east of the range country. The total of all cattle shows little change.

Although the growth of sheep raising was chiefly a product of the opening up of the Far West and that of beef cattle raising was a product of that combined with the expansion of the corn belt, the raising of hogs has been largely a product of the latter factor and was very slightly affected by the opening of the range country. Between 1860 and 1882 the number of hogs nearly doubled. Though there was a temporary decline around 1900, the loss was soon made up and after the first World War a somewhat higher record was reached. This outcome has been owing to the fact that along with the increase in the corn belt the number of hogs in the East and South has shown no appreciable decrease as compared with 1860 and there has been some growth in the Far West.

The most steady and consistent growth among livestock has been that of the dairy cattle. The total number in recent years is about three times that in 1860; between 1889 and 1929 there was an increase of 70 per cent in the milk produced per cow kept for dairy purposes. The fact that dairying is less exhaustive of the soil's fertility and that the area of the market for fluid milk is limited gives this activity great stability of location; and the relatively few factors that cause sudden changes in the demand and supply provide great financial stability. The growth in the number of dairy cattle has been more closely connected with the growth of population than in the case of other livestock. For the same reason the distribution of dairy cows corresponds somewhat more closely to the distribution of population in different sections of the country. The importance of being near the market explains the success of this industry in supplanting many other farm products in the older sections of the country. However, favorable conditions for green pasturage and obtaining the needed feed are important and in part lie back of such concentration as is found in this pursuit in Wisconsin and the adjoining states where, owing to the fluid milk surplus, the production of butter and cheese are given great attention.

Over 40 per cent of the milk produced in the country is consumed as milk and about the same proportion is used for making butter; the rest goes into cheese, condensed or evaporated milk, ice cream, and the feeding of calves. Although there has been a marked tendency to shift the production of butter from the farm to the creameries, especially since about 1890, about one-fourth of the total output is still made on the farm and over half the farms in the country produce some butter. The production of cheese, though far less important, is practically confined to the factories and about two-thirds of the total is made in Wisconsin. The gross farm income from dairy products in 1935 was over \$1.6 billion.

Poultry supply the only other important group of livestock products, and the total gross income from poultry and eggs produced in 1935 was

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over \$1 billion. Nearly every farm keeps some poultry but the extent to which poultry raising is carried on in different sections varies chiefly with the density of population. Such concentration as exists is found in the region extending from the Middle Atlantic states to the Missouri River.

In addition to their products, the livestock of the country yield the farmer a return from the sale or slaughter of the live animals. The business of slaughtering on the farm has greatly declined. In 1919 less than 2 per cent of all farms reported any slaughtering of sheep and lambs and less than 14 per cent any of cattle and calves; over 70 per cent slaughtered some swine; in this the South led. Whereas a considerable quantity of meat products from these slaughtered animals was sold, the greater portion was probably consumed on the farm. Though the 1920 census secured no return of the total value of animals slaughtered on the farm or sold from the farm, it was estimated at over \$3 billion, nearly two-thirds of the total being contributed by the East and West North Central states.

The Relative Importance of the Products of Agriculture Today. As a summary of the outcome of the developments that took place among the chief agricultural products during this period, a statement about the relative importance of the products today will prove useful. As indicative of trends it may be noted that previous to 1928 the amount that farmers received from crops exceeded that obtained from livestock and their products; since then this situation has been reversed. There is a popular tendency to overestimate the relative importance of certain crops such as cotton, wheat, tobacco, or sugar (of the first two, partly because they enter so extensively into trade), and to forget the predominance of corn and the value of the hay crop. Yet a clear conception of the relative importance of these different crops is essential; without it, it is impossible to obtain a real understanding of our present-day agriculture, to interpret the farmer's psychology and political reactions, or to analyze adequately the agricultural conditions affecting general business. Although the importance of farm crops for all purposes is not to be measured by their value, no other one basis of comparison is so useful in economic study. As far as the amount of acreage devoted to the leading crops is concerned, that given to corn was far in the lead with nearly one-fourth of all the acreage harvested in 1930; hay and wheat with about one-seventh each came next; cotton and oats followed with about one-tenth each. Nearly all the others including rye, flax, potatoes, tobacco, sugar, and vegetables had less than 1 per cent apiece.

Dominant Factors in the Trend of Developments. We can now look back over the agricultural developments of the country since 1860 with the purpose of inquiring what factors mainly determined that development. As far as the general expansion of agriculture is concerned, it is clear that two factors were predominant: the growth of population and

the opening up of new agricultural land, chiefly in the trans-Mississippi region. The growth of population provided the chief market for agricultural products, and, aided by machinery, helped to provide facilities for raising the products; the abundance of new land available ensured a cheap supply of this important factor of production.

A third very important influence came from improved transportation facilities. One result of this was to extend the market area within which most farmers could profitably dispose of their products; this was especially important in giving many of the bulkier or more perishable products access to the steadily growing markets in foreign countries. The growth of the European market was an important factor in promoting the expansion of American agriculture during this period, more especially during the years of rapidly increasing output of foodstuffs up to about 1900. Thereafter, as domestic consumption absorbed a larger portion of the output, this market tended to decline in relative importance until the outbreak of the first World War created an abnormal demand so stimulating to the production of many products as to make possible the greatest volume of agricultural exports in our history. Throughout this period American agricultural products found that in the foreign markets they had to face increasing competition from the surplus output of other countries many of which, like Canada, Argentina, and Australia, though less advanced than the United States, were also going through the process of opening up vast undeveloped regions. In the twentieth century, when fresh supplies of free fertile land ceased to be generally available in the United States, many of these other countries were still in the stage of exploiting new land.

As the farmers of the United States began to use more intensive methods of cultivation, often involving higher costs, they found the competition of these other countries more severe, the expansion of agriculture proceeded less rapidly, a larger percentage of the domestic production was consumed within the country, and imports of agricultural products from other countries began to increase. Though war conditions temporarily changed this, it is obvious that in the future foreign markets are likely to be a less important factor in the expansion of American agriculture and that foreign competition in the domestic market will be more important. This change obviously has already had a great influence on the attitude of many farm producers toward the tariff, for a duty that had no effect in raising prices when a commodity was being exported would tend to do this when the country began to import.

Improved transportation facilities, in addition to widening the markets, had another important influence upon the development of agriculture during this period in tending to further specialization in the production of products in different sections of the country. When the

fertile lands of the West secured rail transportation, there was a tendency toward a one-crop system and there developed the enormous bonanza wheat farms, such as appeared in California up to about 1890 and in the valley of the Red River of the North, or the vast cattle ranches in the range country. But the bonanza farm was a temporary phenomenon and economic forces soon tended to bring about its disintegration.

The exhaustion of soil fertility under the one-crop system led to greater diversification of crops and this, combined with the rising value of land which made more intensive methods of cultivation desirable, resulted in splitting up the farms into small units. Although this frequently resulted in greater diversity of crops as contrasted with a one-crop system, there was still a tendency for each section to specialize, since one or two products were predominant and the others were such as best fitted in with the main products. In the older agricultural sections of the country where, except on the Southern plantations, the one-crop system had never really prevailed and considerable diversification was common, there was also a tendency toward specialization, though generally in such groups of products as would prevent serious depletion of the fertility of the soil.

In the process of working out this tendency toward sectional specialization many products underwent a considerable shift in the main centers of production. The situation at any one time depended not only upon transportation facilities but also on such factors as the distribution of population and the progress in the fields of science affecting agriculture. The present outcome of these developments is that the North Atlantic states specialize in dairying, market gardening, and certain fruits; the South in cotton, tobacco, certain semitropical products, early market garden products, and fruits; the North Central states in grains, livestock, and dairy products; the Rocky Mountain states in cattle, sheep, and beet sugar; and the Pacific coast states in fruits and grain.

Among the other factors largely affecting the agricultural development of this period but one can be noted here—the tendency toward more intensive methods of cultivation. In the first half of this period in the newer farming regions of the West, extensive methods still prevailed and much farming was nothing less than that process of mining the soil which has been so common a feature of the country's agriculture. Land was cheap, labor and capital relatively dear, and, acting on the principle of proportionality in combining the factors of production, the farmer made little effort to economize upon, or even to conserve, the fertility of the soil. The fact that farm land generally tended to rise in value even when the soil was being depleted certainly tended to offset, if not to conceal, this element of loss in the eyes of the farmer. Doubtless there were many cases where, had this depletion been reckoned as an element in

cost, the farmer would be found to have sold his produce at a loss; his profit, if any above a fair wage for his work, was derived from the rise in the value of his land which occurred in spite of its decreased fertility.

The prospect that land would rise in value resulted in its being sold at a higher price than was justified by its earning power at the time it was sold and tended to produce overcapitalization. The buyer at this high price, seldom having much reserve of capital and often faced with the burden of carrying a heavy mortgage as well as the taxes, found that he must get as much as possible out of the land at once in order to make both ends meet. This fairly common situation explains various rather characteristic features in the history of American agriculture and has been an appreciable factor in furthering the tendency to mine the soil.

Such methods could hardly go on indefinitely. When the supply of free fertile land was practically exhausted and the value of farm lands advanced very rapidly, even more rapidly than the general price level, an added impetus was given to more intensive methods of production in which, however, the progress of science played an important part. The result is reflected in the somewhat more rapid increase in the output of crops per acre or of animal products per head that has occurred during the past three or four decades. Nonetheless, these increases have not been very great in most cases, even when the present output is compared with that as far back as 1860. In the case of many products the output per acre today is much below that in such countries as England or Germany, as well as below that which experience has shown can be obtained economically in this country. Although more intensive methods are now used than formerly it is clear that only a beginning has been made and that, as compared with the more advanced countries of western Europe, our farming is still relatively extensive in character. The chief opportunity for future agricultural expansion lies in the introduction of more intensive and scientific methods, but it is obvious that the present low value of land in relation to the other factors of production does not justify, economically, such intensive methods as prevail in many countries.

The Mining and Quarrying Industry. Ranking second to agriculture among the extractive industries, though very far below it, stands the mining and quarrying industry. Popular impression tends to exaggerate the importance of the direct contribution of this branch of economic activity to the national income, but we find that, in spite of the remarkable expansion that occurred after 1860, the total value of all its products in 1929—less than \$2.4 billion—was little more than the value of the corn crop for that year. Indirectly, however, the importance of mining is increased since the development of so many other lines of economic activity has been furthered by its expansion.

The outstanding feature in its history during the period was the very rapid rate at which the physical output of numerous mineral products was increasing. In fact, in many of the most important products, the output was being doubled in nearly every decade down to 1920. This means that the output of any one decade exceeded that of all previous decades put together. The factors that furthered and shaped the course of this development were varied; the more important were the growing demand for the products, the discovery of new sources of supply, the developments in transportation that made sources of supply economically available, and the scientific progress in such fields as geology, chemistry, and mining engineering.

Technological Developments. Technological progress has done much to further the growth and alter the economic organization of mining during this period. On one side scientific progress has served to create a demand for many mineral products theretofore little used, if not unknown, and greatly to increase the demand for others. At the same time science has been active in helping to discover and make economically available new supplies of these products. The exploration of the newly opened region of the West disclosed vast mineral resources, but investigation also uncovered unsuspected mineral resources in the older portion of the country. Progress in geology furnished a surer guide in the search carried on by both private initiative and the extensive work of the government's geological survey; new technological devices for exploring mineral deposits lessened the speculative risks attendant upon their development.

In addition, science, particularly chemistry together with mining engineering, devised better processes and new machines for extracting these resources. Thereby it became possible to obtain minerals once physically inaccessible and, by reducing the costs of mining and extracting, deposits which it had not paid to work before could be operated with profit. In some cases, as in gold mining following the introduction of the cyanide process for extraction, ore that had been worked over once and thrown away because it did not pay to try to extract more of the metal was worked over again with great profit. Through such advances vast mineral deposits, theretofore worthless, became economically available and a further step was taken in securing more effective cooperation between man and his natural environment.

Developments in the Economic Organization. The technological developments of the period exercised much influence in shaping the changes that occurred in the economic organization of mining and quarrying. The outstanding feature among these changes was the marked tendency toward capitalistic methods of production. The amount of capital employed increased much more rapidly than the value of the output or the number of workers, after allowing for the higher price level in the latter

comparison. In 1929 over 7,500,000 horsepower was used in the industry; although the amount used in 1860 is unknown, it must have been insignificant. This amount of power used may be compared with the number of people employed—a little under 900,000 in 1929 which was nine times the number employed in 1860. The extent to which technology aided in increasing output (other influences, of course, entered into the outcome) is suggested by the fact that in 1929 the quantity of coal mined per man-year was more than double that in 1880; in the case of copper mining the output per man had risen to almost five times the figure for 1880; in the case of iron ore it was eleven times as great.

The greater use of capital has altered the economic organization of this industry by increasing the scale of production, by leading to the use of the corporate form of organization, and by creating a tendency toward concentration of control. At the 1930 census nearly two-thirds of all the enterprises were under the corporate form of organization but this group employed 95 per cent of the wage earners and turned out nearly the same percentage of the total value of all the products of the industry. Scarcely any general branch of economic activity is more completely under corporate management. The tendency toward large-scale production and concentration of ownership is seen in the fact that only one-fifth of all the enterprises, those having an output of \$100,000 or more a year, turned out over nine-tenths of the total value of all products; 0.5 per cent of the enterprises turned out nearly 30 per cent of the total value. This concentration is most marked in anthracite coal, lead, and copper mining.

The growing use of fixed and specialized capital in the mining industry, as elsewhere, has resulted in increasing the overhead fixed charges and in making it more difficult to adjust the output to the fluctuations in demand and secure a fair price for the product. In certain branches of mining there are other conditions that increase the difficulties in securing such an adjustment: (1) Underground mines once opened up are very difficult to close down without heavy loss. (2) Certain mineral products, largely used in manufacturing, are subject to great fluctuations in demand with the swings of the business cycle. (3) The natural conditions that have limited the supply of mineral deposits make it difficult to open new mines rapidly or suddenly to extend the output of the existing ones. Outside of mining proper the oil industry faces another difficulty in that many producers may be drawing from one pool and each is impelled to try and secure as much as possible before the supply is exhausted, regardless of any glut in the market. Though the influence of these conditions varies considerably among different mineral products, the result has been to make certain branches of the industry, notably oil and soft coal, subject to marked fluctuations between periods of boom and depression, thus

greatly increasing the financial risks attendant upon the industry and accentuating its speculative character.

However, at the same time that the growing use of fixed capital tended to increase one of the risks of this industry, other developments were operating to reduce some of the financial risks. Among these the better methods for determining the presence of mineral deposits have already been noted. The introduction of safety devices to protect both human life and property has helped to offset some of the greater dangers that came with deeper shafts and more use of machinery. The tendency toward concentration of ownership, resulting in the operation of many mines by one company and sometimes in one company's operating mines that turned out several different products, has helped to distribute the risks and afford greater financial stability for a given company. In some cases the concentration has gone so far as to facilitate unity of action among the producers, and occasionally substantial monopoly control has resulted. This made possible a better adjustment of output to demand and more stable prices, but involved the danger of extortion and greater instability in employment.

Development of the Leading Mineral Industries. Judged by its value, coal is by far the most important product of the country's mines, contributing over one-half of the total of all mine and quarry products in 1929. The output of coal has increased at a very rapid rate, rising from 13 million tons in 1860 to a peak of 670 million in 1918 and making this country by far the largest producer in the world. Our output just before the first World War was nearly equal to the combined output of Great Britain and Germany, the only other important producing countries. The increased importance of coal in the economic life of the nation can be inferred from the fact that the per capita production during the postwar decade was about five tons, or ten times the figure for 1860.

The great growth has taken place in the output of bituminous coal; the anthracite output has fallen to barely half of the 1917 peak. In 1860 bituminous made up barely one-third of the total output; in recent years it has constituted approximately seven-eighths of it. This increase has been owing to the introduction of new methods of using this grade of coal, creating new sources of demand, and often resulting in its substitution for the more expensive anthracite on the one hand; it has been owing to the discovery or opening up of new sources of supply on the other hand. Of the new fields developed the most productive have been in West Virginia, southern Illinois, and adjacent states. Less important producing centers have appeared in Alabama, the Rocky Mountain region, and scattered areas in the trans-Mississippi plains. West Virginia has of late become the most important producer of bituminous, but Pennsylvania remains practically the only producer of anthracite. During this period the anthra-

cite output largely passed under the control of the railroads of that region, but recently the government has attempted to divest them of this power.

Despite its preeminent lead in value among mineral products during most of this period, coal was eventually supplanted in this position by petroleum, which experienced a phenomenal growth accompanied by the rise of the natural gas industry. As the first oil well in the country was not opened until 1858, the development of this important industry may be considered entirely a product of this period. Starting in 1860 with an output of 500,000 barrels of petroleum, production increased to over ten times that amount in 1870 and by 1880 exceeded 26 million barrels. Dur-

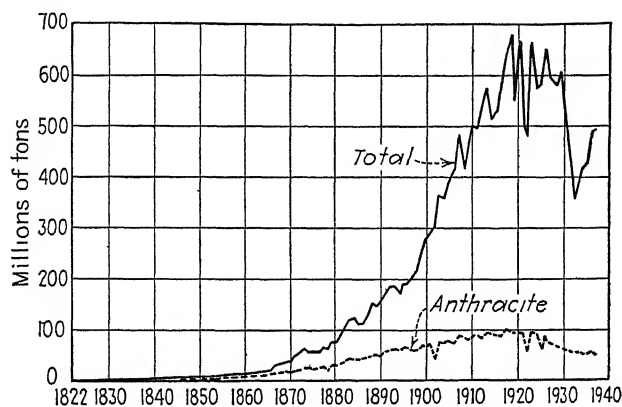


FIG. 48.—Coal production since 1822.

ing the next two decades the rate of growth was less rapid but the output had mounted to nearly 63 million barrels by 1900. Then the opening up of new fields brought another rapid increase and, in 1937, the output was over 1.5 billion barrels. This expansion has placed the United States far ahead of any other country; its output is around two-thirds of the total world production. The accompanying rise of the natural gas industry—particularly useful in that the supplies were largest in sections where coal was relatively scarce, though now it is piped to coal-producing regions—resulted in an output with a value almost half that of petroleum.

The growth in the petroleum output has been stimulated by the new uses to which its various products have been put, notably the oil- and gasoline-using engines, and has been made possible by the discovery and opening up of new sources of supply. The Appalachian field, centering in western Pennsylvania and adjacent states, remained the chief source of supply during the nineteenth century, but its output declined after 1900. The Lima-Indiana and Illinois fields were increasing their production rapidly by that time yet soon declined; but the Illinois output has just recently been greatly increased. The enormous increase in the output

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since 1900 has come from the mid-continent and Gulf fields in Texas, Oklahoma, and adjoining states and from the California field.

The production of crude petroleum has never been marked by the high degree of centralization of control found in the subsequent processes of pipe-line transportation and refining. The Standard Oil Company at the height of its power during the quarter century following 1880, when it controlled nearly 90 per cent of the refined product, never owned more than one-fifth of the crude production. However, there has recently been a tendency among the large refiners to extend their control over oil wells and secure a more effective integration. The occasional efforts made to unite the crude-oil producers so as to limit output always quickly broke down, even in the early period when output was small and came from one field. The resulting fluctuations in output, added to the uncertainties attendant upon production, have made the industry highly speculative in character. Within the past decade vigorous efforts to stabilize production through interstate compacts backed by the support of the Federal government have met with more success.

Ranking third in value of output among the mine and quarry products, though contributing barely 8 per cent of the total in 1929, is iron ore. The output of iron ore in 1870 was over 3 million long tons. From then until 1910 every decade with the exception of the nineties saw the output somewhat more than doubled. Since 1910, when the output reached nearly 57 million tons, there have been marked fluctuations, the high point reached in 1917 being over 75 million tons, but there has been no consistent growth since then. Today in the production of iron ore as in the production of coal, the two resources often called the bases of modern industrialism, the United States far surpasses any other country.

The expansion of iron mining, as in the case of other minerals, is due to factors affecting both demand and supply. Demand increased with the growth in old and the introduction of new uses for the metal, both being augmented by lower costs in producing it. The supply was increased by the discovery or opening up of new deposits of ore and the introduction of better methods for extracting it. Much the most important among the new sources were the vast deposits of the Lake Superior region, particularly rich in ore suited for the Bessemer process. Though a small start had been made in developing these deposits before 1860, it was not until 1892 that ore began to be taken out of the Mesabi range, which has proved the richest of all. In recent years about five-sixths of the country's output has come from the Lake Superior region. The only other deposits of any importance to be developed were those in Alabama where the output began to increase after about 1880 following the introduction of a process overcoming the difficulty that was presented by a high percentage of phosphorus in the ore. The output from the Middle Atlantic states,

half the country's total in 1880, has slowly declined and now is relatively insignificant. In this country the mining of iron ore has generally been connected with the manufacture of iron and steel and their products. The marked tendencies toward integration and large-scale production that characterized that branch of manufacturing have led to great concentration of control in the extraction of iron ore.

Copper ranks second in value of output among the mine and quarry products and contributed nearly 12 per cent of the total in 1929. Although small amounts of this metal had been produced before the opening up of the rich mines in northern Michigan, which occurred just before 1850, the rapid expansion of the output begins with the development of this region and is almost entirely a product of the period since 1860. In that year some 7,000 long tons were produced; by 1880 the output had nearly quadrupled, practically all the increase coming from the Lake Superior mines. About 1880 the great deposits of the Rocky Mountain region, chiefly in Montana and Arizona, were opened up and the very rapid increase in their output, combined with a steady growth in that of the Michigan mines, resulted in more than quadrupling the total for the country during that decade. After 1882 the United States became the leading copper-producing country of the world; after 1895 it was producing more than half of the world's output. Between 1890 and 1910 the output was quadrupled again, reaching nearly 500,000 tons at the latter date. Since then there have been marked fluctuations; the highest point on record, 1 million short tons, was attained in 1929. Within the past decade the United States, though still the leading producer, has lost ground relatively in the face of competition from low-cost foreign producers, particularly the Chilean and the new African mines. Although the Michigan output has increased, much the greater portion of the total increase has come from the Rocky Mountain region, which produced half the country's total as early as 1885 and in recent years has contributed about nine-tenths.

The progress in metallurgy has made it possible to extract various other ores, such as gold, silver, lead, and zinc, frequently found in conjunction with copper, especially in the Rocky Mountain region, and these metals have become an appreciable by-product of many copper mines. The tendency toward concentration of control has been very marked in this industry, chiefly through the taking over of additional mines by the larger companies. Integration is far less marked than in the case of iron; most producers do not extend their operations beyond the refining process. Since about 1900 there has been a very large growth in the smelting and refining of foreign ore, chiefly from Latin America.

In 1860 the output of gold made up about three-fifths of the total value of all mineral products; in 1929, though the output of gold was

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nearly 25 per cent greater than in 1860, it made up less than 1 per cent of the total value of mineral products as classified by the census. Perhaps nothing is more suggestive of the developments in the mineral industries during this period than the fact that the output of gold, though greater than in 1860, has fallen to such an insignificant position today as compared with its preeminence in 1860. After the high point of \$65 million reached in 1853, the output of gold slowly declined, the more rapid fall in the California production being partly offset by an increase in the Rocky Mountain states. In the period 1872-1894, it was about stationary, fluctuating around \$35 million a year except for a momentary increase in 1877-1878 on the opening up of the Black Hills region. (See the chart on page 821.) After 1894 the introduction of new processes for extracting the ore and the discovery of new deposits resulted in a rapid increase in the output, which doubled within a decade. From 1899 it regularly surpassed the record made in 1853 at the height of the California production and in 1915 mounted to over \$100 million. After that the high costs of production reduced the physical output nearly one-half. This decline would doubtless have been greater except for the fact that gold in many cases has become a by-product in the extraction of other metals. Following the devaluation of the gold dollar in 1934, the physical output quickly rose and by 1937 nearly equaled the previous peak of 1915, and its value was almost \$170 million.

In spite of the growing output after 1894 the United States lost its position as the leading producing country. In 1894 Australia took the lead. The rapid development of the rich South African mines placed that country in the first position by 1905; since then its enormous output, far exceeding anything in history, not infrequently has made up nearly two-thirds of the world's total, though recently it has been nearer one-third.

The growth of silver mining in this country is practically a product of the period since 1860. The Comstock lode of Nevada, the first great deposit of silver to be opened up, was discovered in 1859. All of the important producing mines since developed have been located in the Rocky Mountain region. As the chart on page 821 shows, the output reached over 12 million fine ounces in 1870 and there was a fairly steady rise up to 1892 when it was over 63 million ounces, valued at nearly \$56 million. The rapid drop in the price of silver about this time checked further growth until after 1910. The war years brought a rise in the physical output to a new peak of 75 million ounces in 1915 and a new value peak of \$66 million in 1918. These high points were almost sustained by the Pittman Act which put an artificially high value on the domestic product till 1924. The continued decline in the price of silver then cut the value of the output almost in half up to 1930, though the output itself showed

only a moderate decline. Then a sudden drop in the price of silver cut the average value of the domestic output for 1930-1933 to less than \$9 million a year, although the physical volume of this output did not fall below an average of 35 million ounces or nearly half what it had been in 1916-1917, when its value was from five to six times as great.

The chief reason why the output was so slightly responsive to price changes is found in the fact that increasingly in the Far West silver has come to be a by-product of copper, lead, and zinc mining. However, when it took the last drop in price after 1929, the silver interests, always exercising an extraordinary political power considering the insignificant value of their output, succeeded in obtaining a new bounty in the form of legislation that compelled the government to buy enormous quantities of silver. This helped to keep up the price in the world market, and at the same time required the government to pay a price considerably above the world price for the domestic output. Under this stimulus the country's output again rose to about the wartime peak. In recent years the United States has produced around a fifth of the world's output, much more than any other country except Mexico.

There was a very great increase in production of both lead and zinc during this period. The output of refined primary lead rose from 15,000 short tons in 1860 to the peak of nearly 700,000 short tons in 1925; that of primary zinc rose from practically nothing in 1860 to the peak of over 600,000 short tons in 1929. This growth was made possible largely through the opening up of new deposits and the introduction of new processes for extracting the ores. It was not until after 1860 that any extensive development of the Joplin district about southwestern Missouri and Oklahoma was started, but this soon became the chief center of zinc production. More recently there has been a marked growth in the output of both lead and zinc in the Rocky Mountain states where these ores are commonly obtained in connection with silver. In output of both lead and zinc, especially the latter, the United States is far in the lead of any other country, normally producing from a quarter to over a third of the world's production.

The output of all other mine and quarry products is not of sufficient general importance to deserve special mention, since they made up less than 18 per cent of the total value of all such products in 1929. Limestone, the only important product among this group, is used in smelting iron ore and in the manufacture of Portland cement which, starting in 1872, has grown with great rapidity since about 1900. The opening up of bauxite deposits, chiefly used in the manufacture of aluminum, is a new development of this period; for a while the output so increased as to make the United States the chief producing country, though since the war much of the bauxite used has been imported from Guiana. Practically from the

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beginning one concern has enjoyed a complete monopoly of the domestic production of aluminum. After 1890 the discovery of a new process for the extraction of sulphur and the opening up of the Louisiana-Texas deposits resulted in making the United States the chief producer of this mineral and control of the output is highly concentrated.

The Timber Industry. Following mining and quarrying in importance among the extractive industries comes the timber industry. There are no satisfactory statistics showing the net value of all the timber cut, but in normal times it may have been around \$1 billion in amount. By far the greater portion of it was used for two purposes: about one-half for lumber and over one-fourth for fuel. It is clear, however, that this industry did not enjoy a rate of growth comparable with that of the leading extractive industries during this period. The quantity of timber cut increased about $3\frac{1}{2}$ times between 1869 and 1909 when the high point was reached at a total of 44,500,000,000 board feet; by the twenties the cut had decreased about one quarter. This decline has been chiefly due to the substitution of numerous other cheaper or more serviceable materials for purposes where wood was formerly employed. In spite of this increased use of substitutes, the United States still consumes nearly twice as much wood per capita as it did 50 years ago and very much more per capita than the nations of western Europe. The total consumption of wood for all purposes before the depression was estimated at 200 cubic feet per capita, compared with 37 cubic feet in Germany and 14 in Great Britain. The extensive use of wood for fuel in the United States is an important factor in this difference.

In 1869 the North Atlantic states produced two-fifths of the country's output; that of Michigan, Minnesota, and Wisconsin, which was rapidly growing, made up a quarter of the total. In the period 1879-1899 the latter group was the chief producing region. During these years, however, there was a rapid increase in the output of the Southern states bordering on the Gulf or the lower Mississippi and, as the cut of this section continued to expand after 1899 and that of the Northern states declined, this Southern group with about a third of the country's total cut took the lead. The output of pine from the Carolinas and Virginia also increased during this period and by 1909 was about a tenth of the total cut, but here, as in the rest of the South, the peak of production was soon passed.

In the last three or four decades there has been a rapid increase in the output of the Pacific coast states. In 1929 this group took first place with approximately two-fifths of the total cut. Since this section is estimated to have nearly two-thirds of the standing merchantable timber remaining in the country and the South less than a tenth it will obviously remain the chief producing section. However, it has very little

hardwood, which will have to be supplied from the older sections of the country.

In spite of the fact that the timber supply is widely scattered, which sets rather definite limits to the output of any one mill, there is a distinct tendency toward a larger scale of production and concentration of control in the production of lumber. The 1920 census indicates that less than 5 per cent of the mills turned out nearly two-thirds of the total cut. The ownership of the timber stands is less concentrated, though in the Pacific coast region the railroad land grants have resulted in three very large holdings totaling about a tenth of the country's standing timber; around a third of the total is publicly owned. It is estimated that half of the original stand of timber in the country has been cut and that the forests are being used up at a rate considerably exceeding their rate of growth. Recent years have seen more efforts directed toward conservation of the timber supply and something in the way of reforestation, chiefly by the government; but the long period required for growth, the price of timber, and frequently high taxes give little encouragement to private initiative in reforestation.

CHAPTER XXXIII

MANUFACTURING SINCE 1860

Introduction. The history of the United States during this period is marked by the enormous expansion that took place in manufacturing. As a result this branch of economic activity became the largest contributor to the national income. In 1890 the net value added in manufacturing exceeded the value of agricultural products; since then the excess has tended to increase. By 1920 the number of people employed in manufacturing exceeded the number engaged in agriculture and it could be said that the country was primarily an industrial rather than an agricultural nation. Furthermore, although the proportion of the population engaged in this pursuit was not so large as in some countries, the gross value of the output of manufactures far exceeded that of any other nation. In fact before the first World War it was estimated to exceed that of Great Britain and Germany combined, though typically the products were less highly finished than theirs.

Another result was to make the nation relatively self-sufficing as regards manufactured products in general, though still lacking in various special branches, particularly those requiring a relatively large amount of skilled labor. In fact by 1923-1925 the stage had been reached where, on the basis of the government classifications in each field, admittedly not strictly comparable, the imports of manufactured or semimanufactured goods were only a trifle over 3 per cent of the value of domestic manufactures and the exports of such goods exceeded imports in value, being about 4.5 per cent of the domestic production. The fact that the exports of manufactured goods exceed the imports is a striking change when compared with the situation before 1860.

The second outstanding feature in the history of manufacturing during this period was the rapid progress made in the introduction of machinery and capitalistic methods of production, with all the changes in economic organization that this involved. The increasing use of fixed and specialized capital in the form of machinery gave greater scope for the operation of the law of decreasing costs under which there is a fall in unit cost as the output increases. At the same time the expansion of the market made it possible to dispose of a larger output; combined, these developments resulted in a marked growth in the scale of production.

The growing size of the business unit necessitated increasing use of the corporate form of organization, which came to control seven-eighths of the output. Heavy overhead costs resulting from the large investments of capital intensified competition, frequently making it cutthroat in character, increased the difficulties in adjusting output to demand and, aided by the movement⁶ toward integration, tended to bring greater concentration of control, not infrequently carried to the point of substantial monopoly. Outside of railroads, public utilities, and mining there was no important field of economic activity where the problems arising out of modern capitalistic industry were more noticeable or more pressing than in the field of manufacturing.

Technological Developments. Underlying the introduction of new machinery and processes were research and invention, and back of them the progress in various fields of science. Absolutely fundamental as all this was in the economic development of the period no account of the innumerable steps in this progress can be attempted here; it must suffice to note that the rate of scientific and technological advance was doubtless more rapid than ever before in the world's history—the effects were generally cumulative and the decade 1920–1930 probably surpassed any other in the extent and speed with which such improvements were introduced.

A government estimate indicates that, during the first quarter of the present century alone, the output per worker in manufacturing increased 50 per cent. In recent times the number of patents issued has been around 50,000 a year as compared with less than 5,000 a year just before 1860 and less than 1,000 before 1850. The advance in science and invention has been carried on not only by private individuals but by the growth in the resources of the universities which provide opportunities for research, and by generous gifts to large foundations chiefly designed to undertake such investigations. In some fields the government has also taken an active part. In recent years the large corporations have become a very important factor in promoting research and invention—an increasing recognition of the essential dependence between science and success in industry. The rapid expansion of the work of technological schools and the extension of such studies in the secondary schools have helped to provide the preliminary training that facilitated more advanced work.

Particularly important in technological progress have been the introduction of improvements in the devices for securing motive power and the inventions for making use of new forms of power, especially electricity, for without this much of the machinery now in use could not be run. Steam power is now developed with vastly greater efficiency than ever before and, though scarcely a generation has passed since the general introduction of the gas engine and electrical power, it is difficult to see

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how the country could get along without these sources of energy today, so quickly have they sprung into a position as necessities in providing for our economic wants. In the field of manufacturing the amount of available horsepower rose from 2,300,000 in 1869 to 43,000,000 in 1929, steam power making up 40 per cent of the latter. The horsepower of prime movers utilized in manufacturing per wage earner today is probably three times greater than it was at the opening of the century and at that time was nearly twice as great as in 1860.

The Growth in the General Use of Mechanical Power. This trend toward the increased use of mechanical power was, of course, not confined to the field of manufacturing—in fact the greatest growth occurred elsewhere—but we may here summarize this development as a whole. The total installed mechanical power in the country in 1859 has been estimated at 4,800,000 horsepower. This figure rose to a total of almost 42,000,000 in 1899. The twentieth century brought a greatly accelerated rate of growth; by 1919 the figure had risen to 372,000,000 or more than nine times that of 20 years before; an estimate for 1935 places the total at 1,230,000,000 horsepower. By far the greater proportion of the growth during the preceding 25 years was in the form of automobiles, trucks, and busses, which contributed about 70 per cent to the total for 1935, as is shown in the following table:

DISTRIBUTION OF HORSEPOWER IN THE UNITED STATES, 1935

Electric central stations....	44,670,000
Industrial power plants..	20,183,000
Electric railway plants..	2,500,000
Isolated nonindustrial plants..	1,500,000
Mines and quarries.....	2,750,000
Agricultural prime movers	72,763,000 ¹
Automobiles, busses, trucks, and motorcycles	965,000,000
Airplanes.....	3,500,000
Locomotives....	88,000,000
Marine.....	30,000,000
Total horsepower.	1,230,816,000

¹ Of this item 46 per cent is wind and animal power.

This total was equal to almost 10 horsepower per capita. If we take the conservative estimate of one horsepower as equal to ten man power, then this available horsepower was equal to that of a hundred tireless slaves for every man, woman, and child in the country. The electrical horsepower could commonly be bought at a cost of \$20 to \$50 a year. Probably no other available figures can better suggest how the process of cooperation between man and nature, through the progress of science and invention, has contributed to the potential power of the American people in supplying their economic wants more efficiently and adequately.

It must be understood, however, that, of this installed capacity potentially available, only a small portion was actually used to produce power very much of the time; no figures covering the actual use of power in all fields are available. The percentage of production to total capacity has been estimated to vary from 3 per cent in the case of automobiles to 50 per cent in the case of steamships. Despite the vastly greater installed capacity in motor vehicles it was estimated that the power actually used in central electric generating stations in 1935—over 92 billion kilowatt-hours—slightly exceeded that actually used in motor vehicles. The growth in the use of electricity since the first central station was erected in 1882 was such that up to 1929 the output of central stations practically doubled every $5\frac{1}{2}$ years. The per capita use rose from 30 kilowatt-hours a year in 1902, to 762 in 1929. As the electric light and power industry is one where the capital investment is relatively large, this expansion, which raised the investment from about \$500 million in 1902 to over \$13 billion in 1935, made it one of the leading industries of the country as measured on this basis. Its essentially monopolistic character gave rise to the problems of control typical of public utilities generally.

Changes in Economic Organization. The Increased Importance of Capital. The rapid increase in the use of capital among the factors of production was one of the chief causes tending to bring about important changes in the economic organization of manufacturing during this period. The total capital employed in manufacturing as returned by the Census of 1920 (the last time this item was included) was \$44 billion or over forty-four times the amount returned in the Census of 1860. This may be compared with an increase between these years of twenty-six times in the amount of wages paid and thirty-three times in the value of the product. Whereas these census figures for capital are neither very reliable nor strictly comparable and the term "capital employed" is used in the business sense and includes land values, still there can be no doubt that capital in the economic sense was rapidly becoming a very much more important factor in production during this period. Though there was a large increase in working capital, much the greater portion of its growth took the form of plant and machinery, that is, it was fixed and specialized in character, and thus tended to accentuate the problems that arise where such forms of capital are employed. The greater use of capital also led to the need for establishing closer relations between the large manufacturing concerns and the bankers; as a result representatives of the bankers were frequently given a position on the board of directors of the company. Another result was a marked increase in the use of the corporate form of organization.

The Corporate Form of Organization. In 1860 the corporate form of organization was little used by manufacturing enterprises; it was most common among the textile concerns. Though the growth in the number

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of corporations has been rapid and the 1930 census reported over 100,000 engaged in manufacturing, they controlled practically one-half of the total number of manufacturing establishments; the rest were controlled mostly by individuals and to some extent by partnerships. However, the establishments owned by corporations, being much larger, controlled 92 per cent of the gross value of the output and employed nearly the same percentage of all wage earners engaged in manufacturing. Thus in the field of manufacturing the corporation has become the dominant type of business organization.

The growing use of the corporate form of organization in manufacturing, as well as in most other lines of economic activity, has been due in the main to two developments: (1) and more important, the growth in the size of the business unit; (2) the evolution of our corporation laws. The growing size of the business unit necessitated resort to this form of organization since the corporation was best fitted to secure the large amount of capital that was required, sometimes obtained from many thousands of investors, and also because it provided for the specialization and centralization of control in management that were needed in large enterprises.

Although the main characteristics of the corporation remain unaltered, the changes in our corporation laws have done much to make it both easier and more attractive to adopt this form of organization. One important development was the common adoption by the states of general incorporation laws, that is, laws under which any group of individuals could organize a corporation to engage in most lines of business provided they conformed to the general provisions of the law. Such laws had been adopted in most states by about 1860, or shortly thereafter, and obviated the usual necessity for getting a special charter from the legislature. Another development, starting about 1888 in the state of New Jersey and soon spreading to many other states, has been a tendency to grant new powers and privileges to corporations. Particularly important among these new powers has been that of acting as a holding company, that is, a company having the right to own the stock of other companies for purposes of control, a power seldom granted before and very advantageous in many ways, particularly for facilitating concentration of control and for avoiding restrictions or limitations imposed on corporations by some states.

These various developments have resulted in making the corporation the most important type of business organization, measured by the volume of business controlled, in many fields of economic activity. A study of the Twentieth Century Fund indicates that at the time of the 1930 census corporations controlled over nine-tenths of all the income produced in the two fields of manufacturing and mining and quarrying;

almost as much in the field of transportation and other public utilities; nearly two-thirds in trade; over one-half in finance; one-third each in the construction, service, and miscellaneous industries; but in agriculture only six per cent. Significant of the trend toward the concentration of wealth in the hands of a small group of concerns, this study also found that in 1933 out of nearly 400,000 active corporations reporting for income tax purposes less than 600, each having assets of \$50 million and over, owned 53 per cent of the total assets and produced 18.4 per cent of the total national income. On the other hand it should be noted that over "two-fifths of the entire business activity in the United States is not in corporate hands at all," and the largest corporations, as defined above, control less than a fifth of that activity.

Though the evolution of the corporation and an increased use of this form of organization have been essential in the conduct of modern large-scale business enterprise, the results of this development, as in the case of most institutions, have been far from perfect; consequently, we have a corporation problem. The problem deserves far more attention than it has received and, although by no means confined to manufacturing corporations, may best be briefly outlined at this point.

The Corporation Problem. Aside from the fact that it has an existence of its own independent of the life of any individual, the great advantage of the corporation as compared with individual ownership or the ordinary partnership as a form of business organization arises from the fact that it makes possible much greater specialization of functions—particularly important in a large undertaking. The function of the real entrepreneur is performed by the stockholders who as owners take the main risks and are ultimately responsible for the management through their power to elect the directors; the creation of different classes of stockholders may create further specialization in the performance of this function. Bondholders, noteholders, trade creditors, etc., function as a group which provides the portion of the fixed or working capital not supplied by the owners. Finally, the directors and the officials whom they choose are immediately responsible for the general conduct of the business. The result of this specialization of functions is to create a situation where there may arise a marked divergence among the economic interests of these different groups and where, unless the laws provide adequate safeguards, one group may use its powers for its own advantage at the expense of the others. In the case of the ordinary small corporation this danger is far less serious since the two groups where such manipulation is most likely, the officials or directors and most of the stockholders, are made up mainly of the same individuals so that there is no advantage in manipulation except at the expense of the creditor group. But in the large corporation, with hundreds or thousands of stockholders and officials having control

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of enormous sums, the actual specialization of functions is far greater and the resulting evils are due to the failure of our corporation laws to provide the safeguards needed to protect the different groups of interests.

The evolution that has taken place in the corporation laws of this country is primarily a product of the effort to make the corporation a form of business organization suited to the needs of modern large-scale enterprise, and in many respects the changes have been beneficial. However, another influence has been operative in securing changes that frequently were far less desirable. As the use of the corporate form of organization increased, it was found that a considerable revenue could be obtained from the fees charged by the state whose laws were advantageous from the point of view of promoters and organizers of corporations. When it was seen that New Jersey was reaping a rich harvest from this source, other states became anxious to secure a share in this lucrative business and in order to do so began to modify their corporation laws so as to make them even more attractive by giving greater privileges and immunities. Since they were designed to appeal to those organizing corporations, these changes were generally shaped by the wants of promoters and corporation officials and too frequently were not accompanied by proper safeguards for protecting the interests of creditors and the different groups of stockholders.

As a result of this merry competition there has been a marked deterioration in the character of the corporation laws, until some of our states may be said to possess the worst laws of the kind known. Under the generally prevailing practice whereby corporations chartered in one state are allowed to carry on most lines of business in other states without any appreciable additional control, there was no serious obstacle to securing a charter in the state having the most lax corporation laws and then carrying on business anywhere in the country. This situation tended to undermine the effectiveness of the more conservative and carefully drawn corporation laws.

The laxity in the corporation laws of certain states, which has resulted from this development, has made it possible for one or another of the groups in a corporation to use their position to gain at the expense of other groups. This is particularly true of the officials of a large corporation who are in a position where they control vast sums of money belonging to other people who know next to nothing about the actual condition and management of the company. The corporation laws of such states may be said to provide one of the greatest get-rich-quick devices known for the use of an unscrupulous person ready to take full advantage of the opportunities they afford. Certainly they have been an important factor in furthering an inequitable distribution of wealth. That, with such opportunities and temptations existing, the vast majority of our large corporations

have been honestly managed for the best interests of all groups speaks well for those in control; but this should not lead us to overlook the need for reforms to check the operations of the unscrupulous minority.

The failure to introduce such reforms is partly due to the comparatively recent development of some of these evils, for it always takes organized society some time to come to a realization of the existence of such problems and still longer to arouse sufficient initiative to provide the needed remedies. Here, as in so many other instances, our laws lag far behind our economic development and even today the importance of the problem is little appreciated. Another obstacle is found in our form of government and the question how far the Federal government can go in its control of corporations. However, neither it nor the states have yet sought to exercise all such powers as they undoubtedly possess. The legislation of 1933-1935, which created the Securities and Exchange Commission with certain powers to enforce the provision of adequate information on new security issues offered the public and to control electric power utilities, was a step in the right direction, but the New Deal has lamentably failed to attack the problem in any really comprehensive manner.

Another obstacle is found in the widespread confusion between the corporation problem and the trust problem. The latter has attracted much popular attention and, because a few of the trusts have been among the largest corporations and in some instances have afforded striking examples of corporation evils, there has been a tendency to assume that the two problems were fundamentally one and the same. Such is far from being the case, even though they are sometimes found connected. Certainly the most frequent and serious abuses of corporate powers are not among the trusts. The trust problem deals with the abuses connected with the efforts to secure and exercise monopoly power, especially as regards prices. The corporation problem may be said to consist in the need for devising a form of business organization suited to meet the wants of modern large-scale enterprise with the specialization of functions that this requires, which will at the same time provide adequate safeguards to protect all the different groups of interests concerned. At present the chief evils have arisen from the failure to provide such safeguards.

Other consequences of the corporate form of organization arise from what is sometimes spoken of as its "soulless" character. The officials are supposed to be looking after the interests of the stockholders and the stockholders are chiefly interested in dividends. The result is that in all dealings with others purely pecuniary considerations are likely to be even more dominant than in other types of business organization. As officials of a corporation behind which they can hide—for the responsible individual may not be known outside the corporation—some people will do things that they might hesitate to do in a business which they themselves

owned. Similarly acts of a philanthropic or humanitarian character involving some loss, which they might feel free to do if they owned the business themselves, they might hesitate to do when the loss had to be borne by stockholders of a corporation whose interests they were supposed to safeguard. When it comes to the stockholders, upon whom the final responsibility for the control of the corporation rests, they also are too frequently acquiescent in acts done for their interest through the corporation such as they themselves would hesitate to do, or else they remain totally ignorant of them. Individual personal responsibility seems to disappear and is shifted to the shoulders of the impersonal corporation. A form of absentee ownership with its typical evils results. Thus the impersonal, soulless character of the corporation involves some loss in such meager humanitarian traits as may be found in business when carried on on a more individual and personal basis.

The Growing Scale of Production. The increased use of fixed and specialized capital and the growth of the market were the chief causes for the marked increase in the scale of production that took place during this period in many branches of manufacturing. As specialized capital in the form of plant and machinery became a more important factor of production the fixed or overhead charges were increased. This afforded greater chances to lower the costs of production and obtain a larger return by increasing the output; meanwhile competition was an impelling force leading to the same result. Without markets in which to dispose of the greater output it would have been impossible to secure the full advantages of large-scale production, but better transportation and communication facilities helped to widen the market area, and lowered costs of production enabled shipment to greater distances and also increased the effective demand for the product, thus broadening the market still more.

The tendency toward large-scale production of course varied greatly in different lines of manufacturing. It was most marked where the product was widely used in any given market area, where the demand was elastic, where the output could be highly standardized, and where technological conditions made possible extensive use of machine methods in production. The manufacturing industries with the greatest number of plants producing on a large scale at the 1930 census were automobile, railroad car and general shop construction and repair, electrical machinery, iron and steel, petroleum refining, and meat packing. Of the total number of manufacturing establishments less than 1 per cent employed over 500 wage earners each, but this group employed 37 per cent of all the wage earners engaged in manufacturing. The small concerns employing from none to 20 wage earners made up three quarters of all the manufacturing establishments but had only a tenth of all the wage

earners. Thus the great majority of the workers in this field found themselves employed under the conditions that prevailed in relatively large concerns.

Another basis for judging of the prevalence of large-scale production is afforded by the number of concerns whose output is valued at \$1 million or more a year. In 1929 there were over 11,700 such establishments, or 6 per cent of the total; but this small group employed nearly 60 per cent of the wage earners and turned out nearly 70 per cent of the value of the products in all the manufacturing establishments of the country. Though the rise in the general price level tends to exaggerate the growth of large-scale production when size is measured by the value of the output, it is obvious that, even when this is allowed for, the tendency toward large-scale production has been one of the most significant features in the history of manufacturing during this period.

Localization of Manufacturing Industries. Where the advantages of producing on a large scale have been marked, this has been a factor in furthering the movement toward the concentration of a given manufacturing industry in the locality that offered the greatest economic advantages. Still more important a factor, however, has been the widening of the market area resulting from better transportation and communication facilities. This tendency toward geographical specialization illustrates the general principle that the extent of specialization is limited by the technological development in an industry and the extent of the market for its products.

The particular region specializing in a given industry is fundamentally determined by the working out of the law of comparative costs. Consequently this localization is influenced by all the factors that determine the costs of production and distribution of a given product in one place, as compared with those costs in other places within the market area. A given locality tends to specialize in those products where such a comparison indicates that it possesses the greatest relative advantage.

Thus localization of an industry will depend upon such things as the relative costs of plant, raw materials, power, labor, capital, marketing the product, and the amount of taxes. These costs will obviously be affected by many things such as cheap transportation, nearness to sources of supply and markets, climatic conditions, the existence of strong labor unions, and the whole social environment. What is called the momentum of an early start is another influence in that, when an industry has once been started in a given place, for whatever reason, and has attained appreciable growth, some of the costs for a new concern locating there are apt to be lower than would otherwise be the case. In some instances, however, an industry once having become localized in a region may find that changes have taken away the advantages once enjoyed there and

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transferred them to some other place; yet inertia and the costs involved in moving may cause many concerns to remain in the old locality.

Such changes in the various factors entering into comparative costs are constantly taking place. In consequence, we find that the centers in which various industries are localized are shifted from one region to another. Thus, during this period, we have examples of such shifting in the expansion of cotton manufacturing in the South, or the westward movement of flour milling, the packing industry, the manufacture of iron and steel or boots and shoes. Such shifting of course is not confined within the political boundaries of a nation but may be international in its scope, though tariff barriers tend to check such movements. This tendency toward localization of manufacturing is chiefly significant as reflecting changes in the organization of industrial society making possible greater territorial specialization and hence production of goods at lower costs, thus furthering a more complete satisfaction of the economic wants of society.

Integration. Integration may be defined as the extension of the activities of a concern engaged in some one economic line into other economically related lines of activity. Such branching out may be said to be forward, backward, or sidewise as related to the economic process that constitutes the main activity of the concern. Thus a company engaged in producing a crude manufactured article may extend backward into the production of the raw materials, sidewise into the making of by-products, or forward into the more finished forms of production and the processes for marketing them. This tendency, though by no means confined to the field of manufacturing, has been particularly significant there and so may be touched upon at this point.

The movement toward integration is due to various reasons. Integration backward may be based on the desire to control the raw products or other materials used, thus ensuring an adequate supply of the quality needed, at the time required, and possibly at a lower price. Sometimes control of the raw material is sought to strengthen a monopolistic position. Integration forward into the more highly finished processes of manufacturing or into the marketing of the product may be due to a desire to ensure a market for the semifinished product, to control the distribution of the product, or to obtain some of the middlemen's profits. What may be termed sidewise integration occurs when a concern goes into the production of by-products or commodities which in the making or use are closely related to its main output. Frequently this occurs where it affords a chance to spread the overhead costs over a larger volume of business. Sometimes such expansion is due to the desire to find new outlets for the investment of the large profits made, and occasionally the desire for monopoly control leads a concern to enter the field of a competing

substitute. Nearly all forms of integration offer possibilities for the more effective coordination and organization of the whole process of production and distribution of commodities.

The tendency toward integration has been most marked among industries conducted on a large scale. Some of these afford the best illustrations of the extent to which this expansion has been carried in certain concerns. Thus the United States Steel Corporation controls iron-ore mines, coal mines, and limestone quarries providing its chief raw materials; it owns railroads and steamship lines carrying the ore to its furnaces; it produces many finished products as well as the cruder forms of iron and steel; and it has engaged in the marketing of its products in many countries. The packing industry affords an example of integration on an unusually wide scale. Large-scale slaughtering has provided the chance for the economical production of innumerable by-products; in connection with their main output, companies have acquired stockyards, private car lines, and an extensive system for wholesale distribution of their products. With an elaborate distributing system involving a large overhead charge, the next step was to undertake the distribution of other foodstuffs, such as dairy products and groceries, so as to spread the overhead over a larger volume of business. To meet the need for extensive financial resources, close connections were established with banks and commercial paper houses. This barely suggests the extent of integration in this business, yet numerous other industries might be mentioned where it has gone nearly as far.

More frequently however, integration has been confined to a narrower range such as control of raw materials, the manufacture of by-products, or the distribution of the products. Although in some cases starting in an entirely different field of activity, concerns have integrated into certain lines of manufacturing as illustrated by some of the largest department stores and mail-order houses. The movement toward integration tends to develop larger business units and thus greater concentration of control. Over against its advantages are possible disadvantages that may arise where the integrated lines of production are conducted on a smaller scale than would otherwise be the case or where the concern becomes so large as to prove unwieldy with resulting losses in efficiency.

Scientific Management. Just as in agriculture and other lines of economic activity so in the field of manufacturing, the latter portion of this period was marked by an awakened interest in the introduction of more scientific methods for working out the problems of business management. In the main the new so-called "science" of business management involved simply the study of various problems of management by more accurate, detailed, and thorough methods. The progress made in various sciences contributed assistance; new measuring devices were available; there were an increased quantity of statistical data and a more thorough

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analysis of the problems. Particularly important was the development of accounting, especially cost accounting, which provided a more accurate measure of financial results and a sounder basis for guidance and control in management. Only through careful and detailed accounting is it possible to determine the pecuniary results obtained in the production of economic goods or services or to discover the most efficient methods of production; yet even today only a small portion of the business concerns have installed a system of accounting capable of providing the guidance essential to securing the most economical use of their resources. Still more recently the growing interest in personnel administration, aided by the study of psychology and a more careful analysis of the conditions surrounding the worker, has led to the introduction of methods and conditions designed to increase the efficiency of labor, though as yet only a small beginning has been made. In the field of manufacturing, unlike that of agriculture, most of the activity in study and introduction of scientific methods has been the result of private initiative rather than state action.

For the most part the effort to introduce more scientific methods has been confined to problems in the internal management of each business concern; the larger and more difficult problem of the adjustment of the management of such a concern to industrial society as a whole has only recently begun to attract attention. The period of the first World War, with the urgent necessity for conserving and mobilizing in the most efficient manner all the economic resources of the country, vividly emphasized the importance of studying this broader problem as well as that of internal management. It remained for the recent depression to emphasize the urgency of the problem and to create an unprecedented effort on the part of the government to cope with it. That the growth in the complexity and interdependence of modern industrial society organized in the main on an individualistic, competitive basis results in much waste, both to individuals and to society, from a failure to secure the proper coordination in the control of economic activities, has thus been made only too plain. A study made by a group of engineers came to the conclusion that in many lines of industry production fell far below actual capacity. A few of the largest concerns and some organized industries have undertaken a study of their own relations to this broader problem, chiefly through gathering and analyzing statistical data. But the problem is enormous in its scope and involves the whole organization of industrial society. Until recently, scarcely a beginning had been made in the effort to analyze it or to provide remedies.

The Growth of Industrial Combinations or Trusts. Like many other developments that have been noted in this chapter, the growth of combinations has not been confined to manufacturing, but the subject is dealt

with here because it is in this field that the development has been most conspicuous. Though combinations were not unknown even in colonial times, the present-day combination movement is fundamentally a product of modern capitalist industry. Its underlying causes are to be found in the characteristics that have already been noted, more particularly in the growing intensity of competition, the tendency toward large-scale production, and the increased concentration of control. Integration, localization of industry, and the changes in our corporation laws have somewhat facilitated the movement. Mere size or the mass of capital controlled, especially when combined with the use of the extreme, cut-throat, and so called "unfair" methods of competition, has proved an important factor in securing and maintaining trust control. In some industries other factors such as patent rights, railroad favors, exorbitant tariff duties, or control of a limited natural resource have been important sources of power. Occasionally the prospect of deriving profit from promoting a combination has led to such organization but, undoubtedly, the desire to obtain greater profit from decreasing competitive losses, lowered costs of large-scale production, or the power of monopoly to raise prices has been the chief motivating cause.

The combination movement first attained appreciable importance in the decade of the seventies. It was at this period that the effects of the introduction of railroads in widening the market and intensifying competition were most felt. Although modern capitalistic methods of production were spreading rapidly then, the size of the business unit seldom grew as rapidly as its market area was expanded. After the decade of the eighties the widening of the market area through cheaper transportation proceeded more slowly and the size of the business unit in many industries expanded more rapidly; this facilitated combination. Another reason for the beginning of the combination movement at this time was the overexpanded condition of various industries after the reaction from the abnormal demand for products that arose during the Civil War. The resulting keen competition was intensified by the depression of the seventies and relief was sought through combination. As in the case of railroads, where the effort to effect combination appeared at the same time, the first form of organization adopted was some type of pooling agreement. This was the easiest to organize since, although checking certain forms of competition, it still left the members of the group free in most phases of the management of their business. Usually, however, it was found difficult to get the members to abide by the pooling agreement, so the policy followed was apt to be a shortsighted one and the pools were constantly breaking down.

The desire to find a more effective and enduring type of organization led to the adoption of the trust form in the decade of the eighties. During

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the seventies the Standard Oil Company, aided by the railroad favors common at that time combined with extension of ownership over pipe lines and very able management, had secured control over about nine-tenths of the oil refining business. This concern drew up a temporary trust agreement in 1879 and a more permanent one in 1882, under which a majority of the stock of the various corporations which it controlled was placed in the hands of a group of trustees. This arrangement provided complete and permanent control while the trust itself enjoyed even greater freedom and privacy than the ordinary corporation.

Although the pool continued to be used in the organization of combinations during the eighties, especially in industries where the number of producers was relatively great, this new trust form was adopted by certain of the largest combinations. But it was not long before several court decisions declared the trust illegal, so that after 1890 it became necessary to seek some other form of organization. Although this original trust form disappeared, the term "trust," derived therefrom, has continued in popular usage as applied to monopolistic combinations in general.

Fortunately, from the point of view of promoters of combinations, a new type of organization was made available just as the trust form was declared illegal. This was the holding company, first made generally available by changes in the corporation laws of the state of New Jersey, and in most respects as well suited for the purposes of combinations as the trust. Many of the old trusts now adopted this form, as well as some new combinations, though pooling agreements also continued in use. The movement to organize new combinations proceeded rather slowly during most of the nineties, especially in the prolonged business depression following the panic of 1893. In fact, the keen struggle for business during those years temporarily disrupted many of the pooling agreements. After 1897, when more prosperous times returned, there followed five years of great activity in the promotion and organization of combinations. Abundant funds for investment, the prospect of good times, and the hope of monopoly profits provided an unusual opportunity for the promoter to gain through the organization of such combinations and the unloading of their watered securities upon the public. Moreover, by this time it seemed probable that the numerous antitrust laws passed in the preceding decade would not prove a serious obstacle to the operation of these combinations.

The holding company became the most popular form of organization at this time. The movement culminated in 1901 with the formation of the United States Steel Corporation, made up of a number of smaller combinations which had been formed in various branches of the industry during the years just preceding. By 1903 when the willingness of the

public to absorb these new securities had reached its limit and a brief industrial reaction set in, the movement came to a halt.

In the period that followed, the Federal government became far more active and successful in prosecuting combinations. Although this undoubtedly checked the combination movement, it still continued, though at a slower pace. The decisions of the Supreme Court in 1911 decreeing the dissolution of the Standard Oil and the Tobacco trusts, both organized as holding companies, showed that the law still had some teeth in it, even though the details of the dissolution decrees might have been made more effective. These decisions, together with numerous other dissolution decrees or injunctions and further legislation, resulted in compelling the combinations to circumscribe their activities and seek a form of organization that was less obvious and tangible. In consequence, subsequent efforts at combination rather inclined toward the gentleman's agreement, the trade association, the institute, or some form more like the earlier pooling agreements.

This less tangible type of combination soon became very widespread, much more so than was generally realized. From the public point of view it possesses both advantages and disadvantages. It is seldom so strong, nor does it go so far in checking competition and individual initiative, as does the consolidation. It lacks the power to secure all the economies of large-scale production and save the wastes of competition possessed by the strong consolidation and, being so intangible and hidden from public view, the problem of controlling it is often more difficult. In the meantime some of the largest consolidations lost much of their power, partly through government action and partly through the growth of outside competition, so that the less tangible form of combination presents the chief problem of today.

During the first World War, the necessity for mobilizing all the economic resources of the country led the government to favor the formation of organizations of producers in many branches of industry so that it could more effectively deal with the whole group. This gave a marked impetus to the combination movement, chiefly in the form of trade associations. This trend continued through the postwar decade, especially after 1925, following certain favorable court decisions and the adoption of a governmental attitude distinctly encouraging various trade association activities thought to be desirable. These same years brought a rapid growth in local combinations, chiefly in the large cities, sometimes working in cooperation with labor unions and not infrequently dominated by racketeers whose resort to methods of violence in their efforts to establish control exceeded anything of which even the earliest trusts had been guilty. Some of these local combinations, the scope of whose activities is seldom realized, are able within their limited area of action to practice

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a degree of extortion of which few of the more nearly nationwide combinations are capable.

The competitive fight for business following the onset of the depression weakened many combinations and there was a high rate of mortality among the trade associations until the government came to the rescue in 1933 with the National Industrial Recovery Act. Under this law the President created the National Recovery Administration (the NRA) with power to draw up codes of fair competition to be submitted to him for approval. The labor provisions of the codes, described elsewhere, were a bitter pill for most employers but they were thickly sugar-coated by provisions that made it possible to restrict price cutting and various other forms of competition, often to limit output or apportion it, and exempted such action from the antitrust laws provided it did not lead to monopolies or the oppression of small enterprises. The resulting pressure for organization among the producers gave a new stimulus to the trade association movement and, as these groups largely dominated the formulation of the trade practice provisions of the codes, the result was an unprecedentedly wide restriction of competition.

However, after May, 1935, when the Supreme Court declared the law unconstitutional, the elaborate structure collapsed; the efforts made to continue the codes under voluntary agreements proved a failure. Subsequently in two industries, petroleum and soft coal, where the effects of unlimited competition were considered particularly undesirable, special legislation was resorted to, but in both cases it was condemned by the Supreme Court. In the case of coal this was replaced in 1937 by a law levying a tax on interstate shipments that were sold below the minimum prices to be established by a commission. In the case of petroleum, since the courts held that control of production rested with the states, the Federal government had to be content with a law passed in 1935 allowing the states to enter into interstate compacts to limit the output. The powers granted the Agricultural Adjustment Administration to limit output and control the marketing of farm products and the exemption of these activities from the provisions of the antitrust laws is another illustration of the same tendency to restrain the former freedom of competition.

The result of these various developments is that the typical combination of today is the more or less inclusive cooperative group of independent producers that seeks to restrict various forms of competition through agreement and generally is organized as a trade association, an institute, or a cartel. The old consolidated type, which always attracted most attention, though by no means extinct and perhaps best illustrated today in the aluminum industry, is of far less relative importance in the general movement than formerly; the association type, though seldom so powerful as the former, is more widespread than ever before.

Antitrust Legislation and Prosecutions. As usual it required time for the public to realize what was taking place in the combination movement; it took still longer to arouse a sufficient amount of feeling to result in legislation. The Anti-Monopoly party, which appeared in the early eighties, was especially concerned with control of the railroads. The organization of the trusts at this time attracted more attention and the growing agitation, aided by governmental investigations, forced action in the form of prosecutions as well as legislation. In 1890 Congress passed the Sherman Anti-Trust Law and many states began to pass similar legislation. The Federal law was a general prohibition of combinations, monopolies, or restraint of trade in the field of interstate commerce; most of the state legislation was similarly sweeping in its prohibitions of intrastate combinations. Like the Federal act these state laws reflected the prevailing antagonism to monopoly and showed little effort to study the problem broadly and attack it in the only effective way, by striking at the roots of such evils as arose. It was a policy of alleviation rather than of prevention and affords another example of American faith in the efficacy of mere legislation, no matter how regardless that may be of the economic forces against which it has to contend.

From the passage of the Anti-Trust Act of 1890 through the administration of President McKinley the Federal government started only a few proceedings against the trusts and those started brought most meager results. Nor did the states show any more initiative in trying to attack the trusts, though an increasing number added sweeping antitrust laws to their statutes. With a very few exceptions, among which New York, Texas, and Missouri were the most prominent, practically nothing was done to enforce the laws. But, beginning with the administration of President Theodore Roosevelt, a noticeable change occurred. Although Roosevelt, with great discrimination, believed that not all combinations were bad, he was active in furthering legislation and legal proceedings against those deemed undesirable. By this time, too, the general public was showing more concern about the trusts, partly owing to the rapid increase in their number after 1897 and partly a product of the rising demand for various reforms in the economic order which developed at this period and was reflected in the many so-called "muck-raking" articles that appeared in the popular magazines and that were devoted to showing up these evils.

All this resulted in a great increase in the number of Federal prosecutions under the antitrust law and in the enactment by Congress of laws expediting trust prosecutions and creating the Bureau of Corporations with powers of investigation and recommendation. The growth in the number of Federal antitrust proceedings reached a climax in the administration of President Taft, during which far more Federal prosecutions were started than in any other single administration. These proceedings

dragged so slowly through the Federal courts, four or five years frequently elapsing between the beginning of proceedings and a final decision by the Supreme Court, that the most important results of this greater activity were not noticeable until the decisions of 1911 decreeing the dissolution of the oil, tobacco, and other trusts.

Indirectly, however, the increased activity of the Federal government undoubtedly exercised considerable influence by tending to check the organization of new combinations and by leading those already in existence to act with greater caution and circumspection. In the decisions in the oil and tobacco trust cases, the Supreme Court declared that the Sherman Anti-Trust Law did not prohibit combinations in restraint of interstate trade that were reasonable under the common law. The decisions are spoken of as having read the "rule of reason" into the law. In previous decisions the Court had made the distinction between direct and indirect or incidental restraints of trade and refused to condemn the latter. Whether the "rule of reason" really altered the interpretation of the law or simply meant that the same things that had formerly been called "indirect" or "incidental" restraints would thereafter be called "reasonable" and so escape condemnation is a question concerning which there has been a decided difference of opinion. Doubtless in most cases this would be true; but the fact that these decisions were generally accepted as modifying the previous interpretation seems to indicate that it would not hold true in all cases and that the law thus became somewhat more lenient and might enable so-called "good" trusts to escape condemnation. Certainly subsequent decisions appear to justify this view.

In spite of this activity of the government and the injunctions and dissolution decrees secured against the trusts, it was evident that the results fell far short of what the public desired; in fact two decades after the Anti-Trust Law had been passed, the trusts were far more numerous than ever. Moreover, there was doubt as to the efficacy of some of the dissolutions. Though not without some effects, the government appeared to be engaged in a losing struggle against the combination movement. Recognizing this fact, an agitation for additional legislation was started and Congress held a series of fairly prolonged hearings dealing with trust activities and proposed legislation. The problem was studied with much greater care than ever before and the results of this study were embodied in the Federal Trade Commission Act and the Clayton Act, both passed in 1914.

The first act created the Federal Trade Commission which replaced the former Bureau of Corporations and was given similar though more extensive powers of investigation and recommendation. The commission could be used by the Attorney General in planning dissolution decrees and on its own initiative could investigate the results of such decrees.

Most important was the clause declaring that unfair methods of competition in interstate commerce were unlawful, and giving the commission power to investigate such methods and issue orders prohibiting their use.

The Clayton Act contained a variety of provisions some of which applied to railroads and labor rather than to trusts. The clauses applicable to trusts prohibited (under certain conditions tending to cause undesirable restraint of interstate trade) tying contracts, local price discrimination, holding companies, and interlocking directorates and provided various methods for enforcing these prohibitions. Another clause was designed to exempt organizations of laborers or farmers from being declared illegal under the antitrust laws and to exempt their members from prohibitions against "lawfully carrying out the legitimate objects thereof." Whether this guarded clause appreciably altered the situation is doubtful, though it was considered a great victory at the time.

The legislation of 1914 is chiefly significant as marking the first serious effort to strike at the roots of some of the evils and enact laws that were preventive rather than alleviative in character. The work of the Federal Trade Commission, particularly that directed against unfair methods of competition, has proved most useful. In state antitrust legislation, beginning about 1907, there is noticeable a similar tendency toward preventive measures, generally confined to prohibiting certain specified unfair methods of competition. Yet, as previously, few states showed any activity in trying to enforce their antitrust laws.

After the outbreak of the first World War, but especially after the United States entered it, there was a marked letup in trust prosecutions, partly because of preoccupation with other problems and partly for fear of disturbing industry. Moreover, several laws passed about this time seemed to reflect some modification of the general attitude of hostility toward combinations. In 1916 pooling among shipping lines, subject to certain prohibitions and the control of the Shipping Board, was permitted; in 1918 the Webb Export Combination Act authorized the formation of combinations to engage in the export trade, provided they did not tend to restrain domestic trade; in 1920 the Transportation Act repealed the long-standing prohibition of pooling among the railroads but made such pools subject to the approval of the Interstate Commerce Commission; in 1922 the Capper-Volstead Act approved farmers' cooperative marketing organizations, provided they did not tend unduly to enhance prices.

Another factor of considerable influence in modifying the hostility toward the combination movement was the growing concern over the cyclical swings of business and the claim that combinations could help in stabilizing industry. In fact, this claim then began to be used as the strongest argument in support of combinations, and the claim stressing the economies of large-scale production, which had been so prominent in

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the period after 1897, though not entirely abandoned, received far less emphasis—an outcome partly due to the realization that the claim had been greatly exaggerated. Thus there developed not only a less hostile but also a more discriminating attitude toward combinations than that which had prevailed when they first became a prominent feature in our economic life.

During the postwar decade, although proceedings against combinations were resumed and new cases were started, the latter quite failed to keep pace with the number of trusts being formed, to say nothing of several important cases decided against the government. Though the Federal Trade Commission suffered from internal dissension, it was responsible for a distinctly constructive move in initiating its trade practice conferences for various industries which formulated codes listing, as unfair, various practices, some of which were accepted as such by the commission though it withheld definite approval of others. Just as the years of prosperity reached their climax, the commission, apparently fearing it had become too lenient, assumed a stricter attitude and the government also started a number of proceedings. The depression that soon broke proved far more disastrous to many combinations; in fact, it proved so generally disastrous that, as has already been noted, the government itself was soon embarked upon an extensive program for restraining many forms of competition and fixing at least minimum prices.

Some of the legislation of these years affecting the trust movement has already been noted. In addition, the Robinson-Patman Act of 1936 made illegal the sale of goods at prices which were discriminatory as between individuals or localities, as well as at prices that were unreasonably low where the object was to destroy competition or eliminate a competitor. Though of very wide application this law was particularly aimed at the chain stores. The following year the Miller-Tydings Act made resale price maintenance agreements covering branded goods shipped in interstate commerce legal in any state permitting such agreements in intrastate trade. Since most states, largely due to the energetic action of such groups as the druggists, the grocers, advertising media, and producers of branded goods, had already passed such laws the scope of its application was broad.

Finally, in 1938, the Wheeler-Lea Act strengthened the provisions of the existing law against unfair or deceptive practices by including such as injured the public as well as competitors, improved enforcement measures, and added to the restrictions on false or misleading advertising. Meanwhile, as recovery got under way and charges that monopolistic prices were retarding its progress became more common, the government began to assume a more active role in trust prosecutions,

aided by a substantial increase in the previously grossly inadequate appropriations for this purpose.

State antitrust laws, though found practically everywhere, have produced such negligible results that little need be said concerning them. In character they have followed the general trend in Federal legislation—at first broad and sweeping prohibitions and later more specific restrictions aimed at various sources of the power of the trusts. With three or four exceptions, New York being the chief, the state prosecuting offices, generally understaffed, have done almost nothing to enforce these laws. Any real effort to deal with the problem has been left to Federal authorities.

To assert, as many do, that the Federal effort has been a general failure is far from justified. Had no action been taken the situation today would certainly be far different. That the results obtained have fallen far short of what was sought is obvious, and it is highly probable that combinations which to a greater or less degree restrict competition are more widespread than ever before. Nonetheless, their power to exert monopolistic control and the means and practices they could employ to secure and to maintain that control have been substantially modified. The more ruthless monopolistic practices such as were employed in the first three or four decades of the trust movement have been very generally eliminated, at least outside the local racketeering. In addition, the trusts themselves have learned from sad experience something as to long-run limitations upon their power, and the public has learned that a more discriminating attitude toward various forms of restriction on competition is needed, since unbridled competition does not produce the best results under all circumstances. We may conclude that the Federal effort has at least restrained the growth and power of combinations and has certainly raised competitive practices to a higher level. That not more has been accomplished may be attributed mainly to the great strength of the economic forces back of the movement, to the failure of earlier legislation to strike directly at the sources of the power of the trusts, to the courts' limitations in the interpretation of the law, and to the inadequate financial and administrative support of the law's enforcement.

In its broadest aspects the trust problem is simply one phase of the problem where to draw the line between competitive and monopolistic practices and organization in modern industrial society. As our economic organization has evolved, the conditions under which competition and monopoly were most advantageous in a given industry have altered. As competition has become more intense, as the scale of production has increased, and as industrial society has become more complex and interdependent, certain of the advantages of an individualistic, competitive organization of industrial society have decreased and certain

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disadvantages arising therefrom have increased in importance. This necessitates a reconsideration of the attitude involved in our social policy toward competition and monopoly. But such reconsideration must be most discriminating in character, for the variations in technological, economic, and social conditions between different industries are such that a policy which secured the best results in one case might not prove the most desirable in another. In actual life absolute freedom of competition and complete monopoly practically never exist and would seldom be desirable. The problem where to draw the line between relative freedom and relative monopoly needs to be studied with still greater thoroughness and discrimination than have thus far been applied to it.

Because of the spread of combinations and of practices restricting competition, it is frequently asserted that the era of competition as a force in the economic order is rapidly passing or has already passed. Since we have no adequate measure of that force, this can be only a question of opinion. It seems probable that competition reached its most extreme development in this country during the last quarter of the nineteenth century when cutthroat methods were so widely and unscrupulously employed. Since then, and largely since 1917, its power has been considerably modified. Yet even today its force is probably greater than at any time before about 1875. When concentrating attention on the large number of combinations and other devices restrictive of competition today, as contrasted with their comparative scarcity during the previous century, we easily overlook all the other changes in the organization of industrial society that occurred during that period and tended to intensify the force of competition and for the most part still do so. Our economic order is still fundamentally competitive in character; how long it will continue so remains to be seen.

CHAPTER XXXIV

MANUFACTURING SINCE 1860 (*Continued*)

The History of the Tariff to 1890. High Protection Established. Though the tariff affects products of the extractive industries as well as those of manufacturing and also has some bearing on the fiscal history of the government, it can best be considered here since its history during this period was chiefly determined by the desire to foster and protect manufacturing industries. As has already been seen, the Civil War brought with it a rapid advance in tariff duties resulting in a level of 47 per cent at the end of the war, as compared with about 20 per cent in 1860. The immediate cause for this advance had been the fiscal needs of the government. Hence it was generally assumed that after the war was over the duties would be reduced. Yet, as events turned out, such was not destined to be the case, at least as regards the duties that were essentially protective rather than revenue producing in character. In consequence these years mark the beginning of a new period in our tariff history, the period of high protection, which, with but brief intermissions, has continued down to date.

As soon as the war ended and it was evident that the revenue exceeded the needs of the government, there arose an insistent demand for relief from the heavy burden of taxes with the result that by 1872 most of the internal taxes imposed during the war had been abolished except for those on liquors, manufactures of tobacco, and a few minor items. As the internal revenue taxes on manufactured goods were removed, it was expected that the tariff duties on similar products, which had been increased to offset these internal taxes, would be reduced. Yet when this was proposed general opposition from the interests affected at once developed. This opposition was in part based on the fact that after the war many industries faced a trying period of readjustment; some had become overexpanded in meeting wartime demands and all felt the depressing effects of the decline in the general price level. Indeed the situation was such that several industries even sought to secure an increase in the protective duties. Thus, in 1867, the Wool and Woolens Tariff Act raised the duties on raw wool and manufactures of wool to a much higher level than ever before. Shortly afterwards the duties on marble, nickel, copper, and steel rails were considerably increased; in the

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case of copper, the Lake Superior mines, then being rapidly developed, were among the richest in the world and the country was soon exporting large quantities of this metal. However there was little opposition to the reduction or abolition of duties on commodities that were not produced within the country, originally imposed for the sake of revenue, such as those on tea and coffee.

A bill proposing a considerable reduction in duties was defeated in 1867. In its place there was passed an act that made few changes of importance in the schedules of duties that were essentially protective in character, such as those on textiles, iron and steel, glass and clay products; but it did reduce many duties levied primarily for revenue. In 1872, as the revenue was still in excess of the government's needs and a consider-

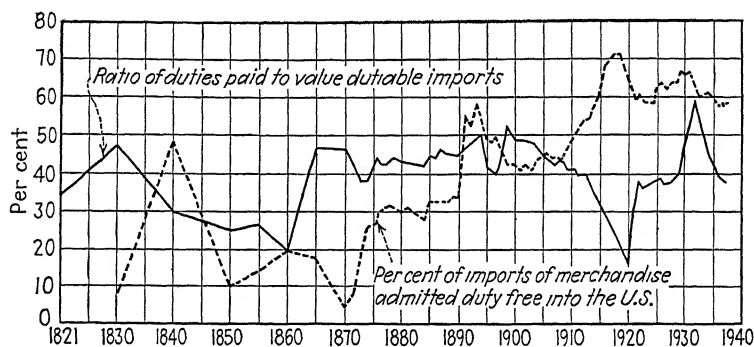


FIG. 49.—The tariff since 1821 (annual figures since 1870).

able popular demand for lower duties continued, an act was passed providing for a 10 per cent reduction in most of the protective duties—a concession made by the protected interests in the hope of preventing a greater reduction. At the same time nearly all the remaining revenue duties were abolished, thus leaving the tariff more purely protective in character than ever before. Scarcely had this act become a law before the panic of 1873 broke over the country; imports fell off, reducing the customs revenue and resulting in a deficit for the treasury. Consequently in 1875 the clause of the act of 1872 providing for a 10 per cent reduction in duties was repealed—another illustration of the disturbing effect of such heavy reliance upon customs duties for revenue.

From then until 1883, except for a reciprocity treaty with the Hawaiian Islands, under which each country admitted the chief products of the other free of duty and which was of great advantage to the sugar growers of the Islands, no change of importance was made. The protected industries then became adjusted to the new level of high duties; the political influence of the South, so opposed to the protective system before 1860, was greatly reduced; the idea of returning to the prewar

level of moderate protection was forgotten; and the majority of the country settled down to quiet acceptance of the policy of high protection. Thus, as on so many occasions in history, temporary conditions arising out of war became at least immediately responsible for important and relatively enduring advances in the system of protection.

The first general revision of the tariff after the Civil War was made by the act of 1883. The surplus revenue was then averaging over \$100 million a year, tempting Congress to extravagant expenditures, and leading to a renewed demand for reduction in customs duties. Recognizing the need for revision Congress in 1882 created a Tariff Commission to draw up a new schedule of duties for its consideration. But the report submitted by the commission, providing for cuts averaging about 20 per cent, went further than Congress was prepared to follow and, by careful maneuvering, the bill that finally was enacted involved much less of a reduction. In some instances, such as certain classes of wool, cotton, and steel manufactures where imports were fairly heavy, the duties were actually increased. In other cases where duties were reduced there was a real reduction in the amount of protection provided. More frequently the reductions were rather nominal, being made where the existing duties were already so high that a cut was possible without danger of letting in foreign competition or where American products could already compete on equal terms with those of other countries. No important change was made in the duties on agricultural products; but, except for those on sugar and wool, few of these had any effect, since most of the great staple products of the farm were being exported. Thus the net result of the act was only a slight reduction in the actual protection afforded.

Neither did the act succeed in reducing the customs revenue. In fact, government receipts from this source during the life of this tariff averaged more than ever before in our history, though this was largely due to heavier imports in more prosperous times. The problem of the surplus revenue, however, did not cause serious anxiety in Congress. That body found an easy and apparently enjoyable solution in increasing the expenditures for pensions and the "pork barrel" appropriations for rivers, harbors, and public buildings—another illustration of the evils attending marked fluctuations in an important source of revenue. Still, this surplus helped to keep up the agitation for a reduction in duties and on several occasions bills were introduced with this object in view. But the group favoring reduction never secured sufficient strength to pass these bills and the only result was to make the tariff question more of a partisan issue than it had been since before 1860.

The Tariff from 1890 to 1897. Still Higher Protection. As the tariff again became a leading political issue, nearly every change in the party

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in power has led to a change in the tariff. Thus, when the Republican party regained complete control of the government at the presidential election of 1888, it at once took steps to revise the tariff in accordance with the principles of protection for which the party had come to stand, and in 1890 the McKinley Tariff Act was passed. The names, which from this date are commonly attached to general tariff acts, are those of the chairman of the Committee of Ways and Means of the House of Representatives in which these acts originate; however, there is frequently added the name of the chairman of the Senate committee that considers the bill in that body. If the period from the Civil War to 1890 may be said to mark the turn to a policy of high protection, the period that followed is characterized by efforts of the protectionists to secure an even greater degree of protection. Those opposed to such a move were far from agreed upon a tariff primarily for revenue; in fact most sought simply a return to moderate protection.

The tariff of 1890 marks the first step toward a still higher level of protection. In the case of textile manufactures, although there were some reductions in the cheaper grades of goods, duties were generally advanced for those where foreign competition was keenest and frequently amounted to between 50 and 100 per cent; extensive use was made of minimum valuations and duties. On the cruder forms of iron and steel products there was little change except for the duty on tin plate which was more than doubled; on more highly finished goods, such as cutlery, there was an appreciable increase. The duty on copper, though reduced, was still retained in spite of the fact that large quantities of the metal were being exported.

As a special effort was made to give more protection to farm products, the duties on wheat, corn, potatoes, eggs, and barley were increased, though, except for barley, it is unlikely that any appreciable number of the farmers raising these products gained thereby. The duty on raw sugar was abolished and in its place a bounty of about the same amount, 2 cents a pound, was granted to domestic producers. The surplus revenue was one reason for this change, as the duty on sugar, though imposed primarily for the protection of the cane-sugar growers of Louisiana, had yielded over \$50 million a year, or more than any other single duty, owing to the fact that nearly nine-tenths of the sugar consumed in the country at this time was imported. The law also included a provision empowering the President to impose duties on sugar, molasses, tea, coffee, and hides if any country exporting these commodities to the United States imposed duties on American products that appeared "reciprocally unjust or unreasonable" in view of the free admission of the products named. This provision was chiefly aimed at the Latin-American countries, but did not prove important in operation.

In the presidential election of 1892 the Democratic party was returned to power and, according to party practice, proceeded to revise the tariff, the result being the Wilson-Gorman Tariff of 1894. The bill passed by the House provided for a very substantial reduction in duties and transferred a number of important raw products to the free list. The Senate was unwilling to go so far, as the majority of the Democratic party in that body was small and there was an appreciable group in the party that favored moderate protection. Consequently the law, as finally enacted, provided for a much less general reduction in duties, a result so unsatisfactory to President Cleveland that he refused to sign the bill and it became a law without his signature. The most important change in this act was that placing wool on the free list; along with this went the abolition of that portion of the duties on manufactures of wool supposed to offset the duty on the raw product, though the protective portion of the duties was generally retained with little change. Next in importance was the abolition of the bounty on sugar and the reimposition of a duty on raw sugar amounting to about 1 cent a pound, partly a product of the need of the government for more revenue. In the case of other agricultural products, as in that of most manufactured goods, the tendency was to reduce the former level of duties between one-quarter and one-half, often substituting *ad valorem* for specific duties. The belated transfer of copper to the free list was of no practical importance. Some duties still remained above those in the tariff of 1883, but the net result was an appreciable reduction; yet it left the general level distinctly above that prevailing before the Civil War. The fiscal needs of the government led to the provision for a moderate income tax, which was subsequently declared unconstitutional.

In the presidential election of 1896, fought over the question of free silver, the Republican party was returned to power. In the following year the Dingley Tariff was enacted. In general the changes made by this act were designed to reestablish the level of the McKinley Tariff of 1890; in the details there is evident a tendency to raise duties somewhat above that level in the case of commodities where foreign competition was most felt. In the cases where such competition was relatively unimportant the duties were frequently fixed somewhat below those of the McKinley Tariff and in a few instances were left as established by the tariff of 1894. The result was a level of duties averaging 57 per cent, higher than ever before in the history of the country, and in practical effect providing the greatest degree of protection the country had ever known.

The duty on wool was restored, that on the cheaper grades at a level higher than in 1890, and along with this the compensating duties on manufactures of wool. Cattle and hides, admitted free since 1872, were made dutiable, chiefly to aid the cattle industry of the West. The duty

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on raw sugar was advanced to about $1\frac{3}{4}$ cents a pound, partly because more revenue was needed. On other farm products, duties were brought back nearly to the level of 1890. The duties on the manufactures of silk and linen were raised to a higher point than ever before. In the case of manufactures of cotton little change was made, since this branch of the textile industry showed great ability to face foreign competition, chiefly in the coarser grade of products. The same situation applied to the manufactures of iron and steel where no important changes were made except for the increase on the more highly finished products. Among mineral products the iron ore duty was left unchanged and copper remained on the free list, but the duties on coal and lead were raised. The duties on glass, chinaware, wood and manufactures of wood were restored to about the level of 1890; much the same was true of the schedule of duties on chemicals, oils, and paints, though in this group the increase not infrequently fell somewhat short of the earlier level. This act also made provision for reciprocity agreements, though the results obtained proved meager.

The Attitude of Different Sections toward the Tariff. The fact that after nearly 100 years of protection a tariff act that provided a greater degree of protection than ever before was asked for and passed caused some to wonder whether the infant industries that showed ability to survive and grow with the moderate protection provided before the Civil War really required so much more protection than they had enjoyed in their infancy, especially since some appeared to be taking on the guise of giants. To understand the support secured for such a policy, it must be borne in mind that the changes that had taken place in the economic development of the country since 1860 had in various ways somewhat altered the interests of different sections in the question of protection.

As before 1860, the Northeast was still the great center of the manufacturing industries that received most protection and this section continued the chief stronghold of protectionist sentiment. Some of these industries had spread westward to the North Central states and, although few of them were so dependent on the tariff as many along the Atlantic coast, they generally supported it and were joined in this by those in the same section who were interested in the protection of certain raw materials such as lumber, wool, beet sugar, coal, and iron. After 1860, as the Far West was opened up and new states admitted to the Union, the protectionist forces obtained vigorous reinforcements there from those interested in lumber, certain minerals, cattle, sheep, beet sugar, and fruits. Since the population was sparse, the political influence of this section in Congress was strongest in the Senate; when the party in power

had only a small majority in that body, as was frequently the case, these Western interests were in a strategic position to obtain favorable duties for their products. From about 1890, the influence of this section in shaping tariff legislation became very appreciable; in recent years, in alliance with the Northeast, it has furnished the most vigorous and insistent support of the policy of high protection.

On the other hand in the Central Northwestern states, chiefly devoted to wheat or corn and little interested in manufacturing, there developed, especially after about 1900, considerable opposition to the high duties on manufactured products. Though the farmers of this region sought higher duties on their products and their representatives in Congress generally voted for the bills increasing protection, there was doubt in the minds of some whether the duties on the staple products which they sold were of any real advantage; they felt that the high duties on manufactured goods considerably increased the prices they had to pay for many of the commodities that they bought. In short they were beginning to suspect, doubtless with good reason in most cases, that in return for their support of protective duties they were obtaining something rather in the nature of a gold brick. Although this did not lead them to vote against the tariff it did result in their opposing certain duties on manufactures that they purchased and enabled them to secure some concessions on this point and also to obtain higher duties on their farm products.

The chief seat of the opposition to protection had always been the South. This continued to be the case during the period following the Civil War. Throughout the country, the attitude toward the tariff among individuals immediately interested therein has been greatly influenced by the stand taken by the political party to which the individual adhered, and adherence to one or the other party has become a family tradition handed down from father to son. The strength of this traditional opposition to the protective system was very marked in the South; yet, in spite of it, changes were taking place which wrought a distinct modification of the extreme hostility toward protection that had characterized the ante-bellum South. These changes were due to the development of various industries in the South that might conceivably profit through protection. From early times the cane-sugar growers of Louisiana had sought and received protection. After the Civil War and the readjustments incident to reconstruction, the growth of cotton mills and the iron and steel industry in the South, together with the expansion of the lumber industry and fruit growing, created a group of interests inclined to favor protective duties. Whereas Southern members in Congress, except those from Louisiana, generally voted against final bills that were distinctly protectionist in character, they not infrequently voted to increase individual

duties on some of these Southern products. Certainly the period since about 1880 has been marked by a decided growth of protectionist sentiment in this section.

This brief summary of the attitude of the different sections of the country toward the tariff will help to explain why it was that, after nearly a century of protection during which the country rose from a position of marked inferiority to one among the greatest manufacturing nations in the world, a tariff act should have been passed that provided for a higher general level of protective duties than ever before. (1) The powerful and even violent opposition of the ante-bellum South had been broken. During the reconstruction years the power of the Democratic party in that section was temporarily undermined. (2) The steady addition of new states in the West decreased Southern influence in national affairs. (3) Southern hostility toward protectionism was modified. This loss of strength in the group opposed to a high tariff was only slightly offset by such dissatisfaction with high duties as developed in the Central Northwest. In the meantime the Northeastern states, which had constituted the old stronghold of protectionism, found a new and increasingly influential ally in the Far West and together, as long as the party of protection remained in power, these groups were able to dominate its tariff legislation.

Causes of the Reaction against Extreme Protection and the Tariff of 1909. The tariff of 1897 was destined to remain in force for a longer period than any other general tariff law since that of 1846, partly owing to an era of marked prosperity and the continuance in power of the party responsible for the law and partly owing to the fact that other issues were attracting attention. Nonetheless, there arose during these years numerous signs of growing discontent with the high level of duties; finally this attained such proportions that even the party of protection admitted a downward revision of duties was at least politically expedient. An understanding of the conditions responsible for this discontent is desirable, not only as helping to explain the immediate reaction but also because some of these conditions still affect the attitude of certain groups toward the policy of protection.

At least five different causes can be named that exercised considerable influence in this reaction.

1. We find a growing group of manufacturers who were beginning to feel that the tariff was a handicap. Many manufacturers of the more highly finished products found that the increased cost of their raw materials, caused by tariff duties, necessitated a higher price for the product and thus limited the market. This was especially felt by those who were exporting manufactured products; this group increased very rapidly after the middle nineties. These exporters also felt that the high

tariff duties of this country led other countries to impose high duties on American products and thus limited their market still further.

2. There was the group of farmers in the Central Northwest, chiefly in the wheat-growing region, as previously mentioned, who felt that they were burdened rather than benefited by the tariff and, while seeking higher duties on their products, they frequently demanded lower duties on manufactured goods, especially on such as the farmers used.

3. The steady rise in the general price level which occurred after 1896 was causing rather general discontent and occasioned widespread complaint about the high cost of living. Though this rise was chiefly due to other causes, it was possible to argue that a reduction of duties would at least tend to lower the cost of many protected products.

4. The rapid spread of the trust movement immediately after 1897 and the belief that the tariff was an important factor in fostering this movement caused restlessness. Here again the influence of the tariff was exaggerated in the popular belief, though not without some foundation in fact; but the cry that the tariff was the mother of the trusts and so ought to be abolished on trust-controlled products met with popular response.

5. The growing sensitiveness on the part of the people to various forms of special privilege, aroused by the outbreak of the "muck-raking" articles that became so numerous in the popular magazines after about 1900, and the growth of large fortunes were other factors. The tariff was attacked, also, as an iniquitous form of such privileges. Though never making any popular appeal or exercising any such actual influence as the above-mentioned factors, one other point may be noted. The country suddenly woke up to the fact that its natural resources were not unlimited, the movement for conservation appeared, and it was pointed out that, by removing duties on various raw materials and importing them from other countries, we would help to conserve our own supply of natural resources.

The gathering opposition from these various sources led both of the great political parties in the presidential campaign of 1908 to adopt a plank in their platform favoring a downward revision of the tariff. The election resulted in the choice of Taft for President and a continuance in power of the Republican party which at once undertook to draw up a new bill, resulting in the Payne-Aldrich Tariff of 1909. The law was a disappointment to those who had looked for lower duties for, though the general level was somewhat reduced, few cuts were of substantial importance, and these were partially offset by cases where duties were advanced. The return of hides to the free list made possible a cut in the duties on manufactures of leather. The duties on coal, iron ore, and the chief iron and steel products were considerably reduced, but these duties had ceased

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to be of much actual influence. The vigorously attacked schedule on wool and manufactures thereof was left practically unchanged; the same was true of the duty on sugar. Readjustments in the duties on manufactures of silk resulted in an appreciable increase in protection and certain cotton manufactures obtained a higher duty, as did zinc ore and a few fruits.

In addition a number of special features deserve mention. Products of the Philippine Islands were admitted free of duty, except for a nominal limitation on the quantity in the case of sugar and tobacco. This provision was of decided advantage to the Islands by enabling them to obtain higher prices for some of their staples; in some cases it probably benefited consumers in the United States. Another clause provided for an additional or maximum duty on products of a country that unduly discriminated against American goods—a clause designed to be used as a lever in tariff bargaining, though it did not prove important. This took the place of the reciprocity provisions of the act of 1897 which were repealed. Another clause was used as a basis for creating the Tariff Board, established in 1911, to gather information needed in carrying out this clause or for general purposes in tariff legislation, something that was greatly needed. Finally, there was a clause imposing a small tax on the net income of corporations for the purpose of securing more revenue to meet the growing expenditures of the government.

There was a widespread feeling that the party in power had failed to live up to its campaign promises and, in part to offset this, President Taft, who had endeavored to secure a somewhat greater reduction in duties, finally obtained approval for a treaty of reciprocity with Canada. But this effort came to naught when the party in power in Canada favorable to the treaty appealed to the people and was defeated at a general election.

The Return to Moderate Protection under the Tariff of 1913. In the presidential election of 1912 the tariff was a prominent issue and, aided by the Progressive split in the Republican party, the Democrats were returned to power under the active leadership of President Wilson. A special session of Congress was promptly called and passed the Underwood Tariff of 1913. This act was notable in that it provided for the most general and substantial reduction in duties made by any tariff law since 1860. In fact it might be said that, for the first time, the general level of duties was reduced to a point not far above the moderate protection such as had prevailed in the period between 1816 and 1860. A number of important products were transferred to the free list including lumber, coal, iron ore, pig iron, steel ingots, blooms, wire and rails, boots and shoes, wheat, flour, cattle, meat, eggs, milk and cream, together with several manufactured products supposed to be controlled by trusts. Of greater importance, as far as the actual effects went, were the provisions

placing raw wool on the free list, reducing the duty on sugar, and providing for its abolition after May 1, 1916. Substantial cuts were made in the schedule of duties on iron and steel products and that on textiles, notably those of cotton and wool. At least moderate reductions appeared in most of the other schedules.

On the other hand duties were increased on many luxuries, chiefly for the sake of revenue. The maximum and minimum clause was dropped, but an antidumping clause was retained. The Tariff Board had ceased to exist owing to the failure of Congress to grant the necessary appropriation for it in 1912 and, although this law made no provision for it, an act of 1916 created the Tariff Commission with substantially similar functions. A new feature appeared in the provision for higher duties on goods imported in foreign ships where existing commercial treaties did not prohibit such discrimination. This effort to aid the merchant marine revived a policy that had prevailed in the period 1789-1815, but the general prevalence of commercial treaties made it inoperative. Finally, as the government was in need of more revenue and it was obvious that this act would reduce the receipts from customs duties, there was included a provision for an income tax, which had just been made possible by an amendment to the Constitution. This income tax, which bore chiefly on the rich, combined with the reductions in duties, most of which bore with relatively greater weight on the poor, resulted in a marked shifting in the burden of Federal taxation from the poor to the rich and was in part due to the growing discontent with the existing distribution of wealth. This shift in the burden of taxation and the return to a level of moderate protection were the two most significant features of the tariff of 1913.

The period during which the Underwood Tariff remained in force was destined to prove a most troubled one owing to the outbreak of the first World War and consequently affords little basis for judging of the effect of the lowered duties upon the country's industries. At the same time the need for more revenue became pressing and, after the country entered the war, assumed stupendous proportions. As far as the tariff was concerned the outstanding fact is that the country passed through this crisis without any appreciable change in customs duties. The provision of the act of 1913 removing the remaining raw sugar duty of about $1\frac{1}{4}$ cents a pound on May 1, 1916, was repealed for the sake of the large revenue which this duty yielded, and a decided increase was made in the duties on dyestuffs to protect manufacturers who had entered upon their production when the war cut off the imports, previously supplied chiefly by Germany. Practically no other changes were made during the war for, although there was talk of imposing duties on tea, coffee, and similar revenue-producing commodities, the suggestion was abandoned as inexpedient. Thus this

was the first war involving any really serious strain on the nation's finances during which no considerable change in customs duties was made. This outcome may be explained as due in part to the traditional opposition of the party in power to raising duties and in part to the fact that the fiscal needs were so great as to make any additional revenue reasonably obtainable from this source a mere drop in the bucket.

High Protection Restored after the War. In the presidential election of 1920, the Republican party was returned to power. Doubtless, under any circumstances, it would have proceeded to repair some of the breaches in the high protective tariff made by the Democrats, but the demand for such a move was greatly intensified by various reactions arising out of the war. In 1920 the upward trend in the general price level halted and was followed by a sudden and precipitous drop ushering in a short period of acute depression. The drop in prices was particularly marked in the case of agricultural products and the resulting distress was most severely felt in the regions chiefly devoted to grain and livestock. An increase in tariff duties was among the relief measures insistently demanded by the farmers regardless of the fact that for the great majority (except the growers of wool, sugar, fruits, and, under certain conditions, spring wheat), such duties could be of little actual aid. Manufacturers also suffered from the general depression, especially those whose production had been greatly stimulated during the war, including the new industries that had arisen to supply goods the importation of which had then been cut off. It was urged that unless duties were increased these infant industries would be ruined by European competition and even the older industries would suffer because the depreciating European currencies enabled Americans to buy goods in Europe at a low cost in terms of dollars and thus stimulated imports.

The opposing argument that, since many European countries had become heavily indebted to the United States during the war and were finding it difficult to pay off the debt, it would make this all the more difficult if we checked imports from those countries, received scant attention; it was countered by an exaggerated picture of the injury to domestic industries that would result and the assertion that rather than suffer such consequences it would be better to let the debts remain unpaid or cancel them. Another argument was that the unemployment caused by the depression would be aggravated unless imports were checked. Finally, the old national self-sufficiency argument was brought forward again, for the war had intensified the spirit of nationalism and had shown that for some manufactures, such as certain chemicals, dye-stuffs, and optical glass, the country was largely dependent upon other nations. Industries producing things so essential in war came to be spoken of as "key industries" and tariff duties to protect them and make the

nation more nearly self-sufficient were strongly urged. Thus, once again conditions arising out of war became an important factor in bringing about an increase in the tariff. Though many of the difficulties that are cited as justifying such relief are only temporary and soon disappear, the duties are apt to prove relatively enduring, as was shown after the War of 1812 and the Civil War.

The first move toward higher duties was the Emergency Tariff Act of 1921, a temporary act passed in response to the farmers' demands and designed to serve until Congress had time to consider a general revision of the tariff. This act restored the duties on wool, corn, wheat, and meat at new high levels and increased the duty on sugar. In 1922 this act was superseded by the general revision known as the Fordney-McCumber Tariff. The professed general objective was to restore duties to approximately the level prevailing before the tariff of 1913. In the majority of schedules this was done. Where there was an appreciable departure from this standard, the tendency was to accept lower duties where the earlier level had been so highly protective that the reduction was of slight consequence. Not infrequently a higher level was adopted in cases where foreign competition was appreciably felt. "The outcome," to quote Prof. Taussig, the outstanding authority on our tariff history, "was a tariff with rates higher than any in the long series of protective measures of the whole period."

On agricultural products the actual duties were in general higher than ever before in our history and, though some of these had little effect, there can be no doubt that the real protection afforded was greater than ever. The textile schedules were restored to about the old level, but the duty on lace was raised to an abnormally high point. Coal and iron ore were left on the free list but on the cruder forms of iron and steel products duties of a moderate character, though of slight importance, were restored. Chinaware received higher rates than formerly. The duty on toys went up to 70 per cent; that on pocket knives amounted to from 80 to 300 per cent. An unusual method employed in figuring the duties on coal-tar products and dyes designed to aid this new industry made the level almost prohibitive. To placate the farmers agricultural implements, binder twine, and potash were included in the free list along with hides, leather, and boots and shoes. A new special provision authorized the President, on the recommendation of the Tariff Commission, to raise or lower duties by not more than 50 per cent where it was found this would tend to equalize differences in cost of production in the United States and the leading competing foreign country. However, very few changes—in almost every case a raise in duty—were made under this authorization. The act also included important changes improving the administrative provisions, largely a product of the work of the Tariff Commission.

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The next change in duties came under the Hawley-Smoot Tariff of 1930. It had its initiative in the desire to give further assistance to the agricultural interests which, it was felt, had not fairly shared in the general prosperity of the later twenties. The original intention of the administration, that the revision of duties should be a limited one applicable chiefly to farm products, had to be abandoned under the pressure of other special interests demanding assistance and, despite the opposition of the farm groups, numerous manufactured products were granted an increase in duties. As a result the average ad valorem rate on dutiable products was raised to 40 per cent or about one-fifth higher than that of the law which it replaced and much above that of the tariff of 1913.

Raw sugar and wool obtained a moderate raise but the average increase in the general agricultural schedule was over 70 per cent and established a far higher level than ever before. An attempt to raise the price of those farm products that could secure no benefit from duties because they were largely exported, through the device of an export debenture system, was defeated with the support of the administration. Hides, leather, shoes, timber, cement, long-staple cotton, and brick were taken from the free list and made dutiable. Among manufactured products generally, though the majority of rates was left unaltered, there was a tendency to increase duties wherever foreign competition was appreciable, especially in the higher grade products. Such cuts as were made commonly occurred in cases where the reverse situation existed, such as automobiles, agricultural implements, and aluminum. The flexible provision of the previous act authorizing the President to increase or decrease duties by not more than 50 per cent on recommendation of the Tariff Commission was retained, though the President no longer had the power to alter the actual rate recommended.

As is usually the case, the depression brought a demand for more protection, though the advent of the party traditionally opposed to increasing duties in 1933 checked any move for a general upward revision. In 1932, before this happened, advantage was taken of the chance to attach an amendment to a revenue act that imposed duties on petroleum and its products, coal, lumber, and copper. In 1934 similar action was taken as to most forms of whale and fish oils; in 1936 various animal and vegetable oils were added to the list. The new duties levied in 1932 were to continue until July, 1934, but were subsequently extended and, to prevent any move for their reduction, all of them were exempted from the flexible tariff provision.

A move in the opposite direction was initiated under the Trade Agreements Act of 1934 designed to stimulate our export trade. Under this law the President was authorized (originally for three years but subsequently twice extended for the same term), to enter into commercial

agreements with foreign countries under which American duties could be reduced not more than 50 per cent. This move reflected the rapidly growing tendency among nations to settle international commercial relations by bargaining arrangements rather than by independent action on the part of each. It also had the marked advantage of taking the question of duties, within the specified limits, out of the hands of Congress where the influence of pressure groups and logrolling methods was so great and thus of securing action based on broader and sounder considerations of social policy. The agreements so made were to be for not over three years and thereafter were terminable on six months' notice. By the spring of 1939 over a score of such agreements had been made covering countries with which over half of our foreign trade was carried on; and concessions thus made were, with certain exceptions, extended to goods from other countries enjoying most-favored-nation treatment. The exact results are not measurable. That the agreements have brought a substantial gain, both through stimulating exports and reducing the duties on many imports, is unquestionable.

In addition to the advance in customs duties, recent years, especially since the first World War, have seen an increasing tendency to resort to indirect or administrative methods of restriction on imports that constituted an "invisible tariff." Reflecting a world-wide movement but particularly marked in the totalitarian states, the United States, partly in self-defense, shows signs of following the general trend. Thus far it has proceeded more slowly than many, partly owing to its continued favorable balance in international payments. These restrictions take the form of antidumping measures, countervailing duties on bounty-fed imports, penalizing imports from countries discriminating against the United States, prohibiting the import of goods made by convict or forced labor, requiring goods to be marked to indicate the country of origin, fixing quotas for imports from given countries, and various regulations adopted as police measures to protect public health, safety, and morals and the health of plants and animals.

Whereas there may be excellent justification for most of these forms of restriction, there is an ever-present danger of their being used to secure a disguised type of protection. Much depends upon impartial administration. It is claimed that the restrictions to protect animal and plant health went much further than was necessary for that purpose. The quota system clearly has had almost purely protectionist objectives in practice, the most extreme case being that of sugar where the ever-powerful influence of the domestic growers secured an increase for themselves, chiefly at the expense of the growers in the insular possessions. Despite a reduction in the duty on the Cuban product, according to one, probably extreme, estimate, this resulted in our paying \$350 million more for our

sugar in 1936 than if it had been bought at world market prices. It may also be noted that most of the real pressure to secure enactment of the law granting independence to the Philippine Islands in 1946 came from protectionist groups hoping thus to cut off the free imports of sugar, tobacco, vegetable oils, etc. from those islands.

The Tariffs Unscientific and Their Influence Exaggerated. In looking back over the history of the tariff during this period, we may single out two features as deserving special comment. One is the very unscientific way in which tariff duties have been determined. This characteristic of our tariff legislation must be admitted regardless of one's belief in protection or free trade. In part it is due to the fact that the determination of customs duties on any scientific basis is an extremely difficult and complicated question and requires far more detailed information than has ever been available. Few if any experts possess all the technological and economic knowledge necessary to determine upon the duties in any one class of commodities; yet there were nearly 3,000 commodities upon which duties were fixed in recent laws. Even if the requisite knowledge were available, no member of Congress could reasonably be expected to devote enough time to the question to secure a mastery of the subject. Few have showed much inclination to act on the basis of such expert opinion as was available.

Too frequently protective tariff acts are looked upon as another form of pork-barrel legislation in which each member of Congress endeavors to secure some duties believed beneficial to his district or state; and his vote for duties sought by other districts is secured by granting him what he desires. Of course conflicting interests develop and compromises have to be made, but this only increases the lack of any scientific method in the results. A slight advance has been made through the work of the Tariff Commission and much more through the recent trade agreements. Yet it must be confessed there is little reason for expecting that Congress, even if it still retains the power to decide on the question of general policy, would be content to leave the determination of detailed duties to a group of nonpolitical experts.

The second point for comment concerns the effect of the tariff on our economic development during this period. This question also is so extremely complicated and the lack of detailed facts so great that no very exact answer can be given, though the detailed studies available in a few cases, combined with reasoning based on the general principles of economics, make possible a few tentative general conclusions. Undoubtedly the high tariff duties prevailing after the Civil War somewhat hastened the growth of various lines of manufacturing, enabled certain branches of manufacturing to attain a greater size than would otherwise have been

possible, and helped some new or infant industries to become fairly well established.

In other cases the higher costs of materials resulting from protective duties, particularly those on raw materials (for few countries with a protective system impose such duties on raw materials used in manufacturing as does the United States), have hindered development. It is most significant that the branches of manufacturing that have enjoyed the greatest growth are, generally speaking, those where machinery has been extensively introduced in place of hand labor. In industries where this has not as yet been possible, unless high labor cost has been offset by some other marked advantage such as cheap raw material, American manufacturers have been much less successful in meeting foreign competition, even with the aid of high duties. This is well illustrated by the fact that in the highly finished products of certain industries, where relatively more hand labor is required, such as the finest textiles or the cutlery branch of the steel industry, imports are still large. In the case of the coarser cotton goods or the cruder forms of iron and steel or the highly finished "American specialties" such as sewing machines, typewriters, watches, and automobiles, produced by machine methods on a large scale, American manufacturers are able to compete successfully in the world's markets.

This would seem to indicate that, in the branches of manufacturing that have proved most successful under protection, the introduction of machinery and American methods of organization have been the chief factors in the results achieved. Protection has probably hastened growth and made possible some branches that otherwise could not exist; but the main trend and general extent of development would probably have been much the same without this aid. As far as agriculture and the other extractive industries are concerned, protective duties have been of still less influence. In many cases the duties had no effect whatever; in other cases a slight influence in a few small sections; in only a very few cases of important commodities has there been an appreciable effect upon production. Certainly farmers as a whole would always have been distinctly better off if there had been no protective duties of any sort.

In general, we may conclude that the effect of the tariff upon the economic development of the country has been greatly exaggerated; in its main outlines and general extent, that development would have been very much the same under free trade, only slower in some lines and more rapid in others. The effects, both desirable and undesirable, have never been so great as the advocates or the opponents of the system have been wont to claim or popular opinion has been accustomed to believe. One explanation for this exaggeration is found in the fact that the tariff policy

has been a vigorously controverted political issue almost from the beginning of the nation's history. Partisan discussion inevitably led to extreme claims on both sides, and the very complicated economic character of the problem has made clear-cut disproof of these claims very difficult. Further, the general public has shown neither willingness nor ability to analyze the facts or apply the principles involved to test these claims.

This after all is only another illustration of the universal tendency of people to seek or accept the simplest explanation for economic phenomena, however complicated they may be in fact. This tendency is particularly marked in the case of legislation affecting economic conditions. Whatever developments follow such legislation are generally attributed to the statute by a form of *post hoc propter hoc* reasoning regardless of all the other factors that shape the actual results. It cannot be too strongly emphasized that what the United States produces itself instead of importing is fundamentally determined by the working out of the law of comparative costs. Tariff duties and other restrictions may in some measure check the working out of this principle but, unless carried to unknown extremes, such restrictions can exercise only a minor influence upon the general course of this country's development.

A second explanation is found in the size of the country, its great variety of resources, and its distance from most other nations. Under such conditions no tariff can exercise the influence upon a country's general economic development that would be possible in a small country of very limited resources and in immediate or close proximity to numerous other important countries. However, admitting that the actual effects of the tariff have been greatly exaggerated, it obviously does not follow that such effects as it has had were not on the whole advantageous. Whether, in fact, its advantageous effects were more than offset by the disadvantageous effects, as most economists believe, is a question too complicated to permit of adequate discussion here.

The Development of Manufacturing Industries in General. Thus far our attention has centered upon the chief changes in the economic organization of manufacturing that occurred during this period. These topics have been discussed at some length because a knowledge of them is so essential to an understanding of modern industrial society and the changes that have given rise to many of the outstanding economic problems of today. The topics have added significance because of the marked growth in the importance of manufacturing in our economic life during this period. We now turn to a brief account of the actual development of manufacturing, first taking up the growth of manufacturing in general, then the growth of certain leading branches, and, finally, some of the broader aspects of this development.

MANUFACTURING SINCE 1860

The growth in the value of manufactures during this period is indicated by the following table based on census returns:

	Year	Gross value of products, millions	Value added by manufacture, millions
Factory, hand, and neighborhood industries	1859	\$ 1,885	\$ 854
	1869	8,385	1,395
	1879	5,369	1,972
	1889	9,372	4,210
	1899	13,000	5,656
Factory industries only ¹	1899	11,406	4,831
	1904	14,793	6,293
	1909	20,672	8,529
	1914	24,246	9,878
	1919	62,041	24,809
	1929	70,434	31,885
	1935	44,993	18,552
	1937	60,712	25,173

¹ Excluding establishments with less than \$5,000 annual value of product.

Using the figures in the last column and making allowance for changes due to fluctuations in the general price level, we see that the decades of the seventies and the eighties showed much the most rapid rate of growth during this time and that the second decade of the twentieth century was next. On the same basis it would appear that the output of manufacturing in 1929 was 28 times as great as in 1859; on a per capita basis it was over 7 times as great. This phenomenal expansion of manufacturing may well be considered the outstanding feature in the economic life of the nation during this period.

Other figures reflecting the growth of manufacturing are given in the table on page 708.

Even without allowing for the omission of hand and neighborhood industries in the recent census returns, the great growth in the number of wage earners and in the amount of capital (cutting the latter in half to

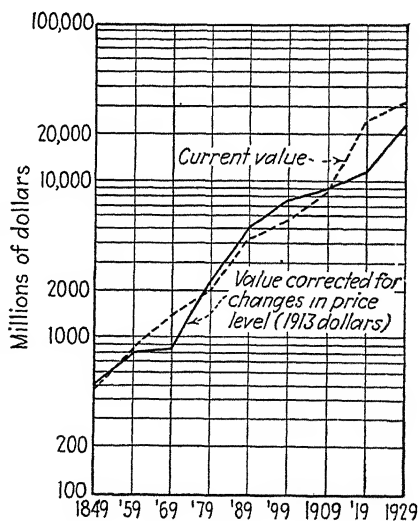


FIG. 50.—Rate of growth of manufactures, 1850-1930 (net value added in manufacturing).

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offset higher prices would be very conservative) also suggests the enormous expansion of manufacturing at this period. At the same time the smaller rate of increase in the number of establishments (here an allowance for the omission of the small establishments is important) indicates the general tendency toward a larger scale of production. Since 1890, as a result of this growth, the value added in the process of manufacturing has exceeded the value of the products of agriculture; by 1919 the number

	Year	Number of estab- lishments	Wage earners	Capital, millions	Wages, millions
Factories, and hand and neighborhood industries	1859	140,433	1,311,246	\$ 1,009	\$ 378
	1899	512,191	5,306,143	9,813	2,320
Factories only	1899	207,514	4,712,763	8,975	2,008
	1919	290,105	9,096,372	44,466	10,533
	1929	209,862	8,821,757	....	11,607
	1935	169,111	7,378,845	.....	7,545
	1937	166,794	8,569,231	....	10,112

of people engaged in manufacturing had surpassed the number employed in agriculture. Thus, although the total value of farm property at that date still considerably exceeded that employed in manufacturing, it may be said that manufacturing had become the most important branch of economic activity in the country, and that agriculture, so preeminent until the close of the nineteenth century, has been relegated to an inferior place. (See the charts on pages 726 and 1064.)

The Leading Manufacturing Industries. Measured by the value added in the process of manufacturing, which is a better measure of the contribution of each to the national income than is the gross value of the product since the latter includes the cost of raw materials produced by others, the leading groups of manufacturing industries in 1935, as classified by the census, were in order: food and kindred products, textiles and their products, machinery exclusive of that for transportation. In each of these groups, the value added was between \$2 and \$3 billion. Next in order, each contributing over \$1 billion, came: iron and steel production; printing, publishing, and allied products; chemicals and allied products; air, land, and water transportation equipment. The ranking of single industries on the same basis shows the printing and publishing and the motor vehicle industries enjoying a decided lead over all others, with steel works and rolling mills as a poor third. Next in order came the industries producing electrical machinery and supplies, bread and bakery products, women's and children's clothing, cotton goods, ma-

chinery not elsewhere specified, and petroleum refinery products. It will be seen that nearly one-half of this group is made up of industries that have developed almost, if not entirely, since 1860.

Outstanding Developments in Some Leading Industries. The rapid growth of the iron and steel industry, which eventually placed this industry in the United States far ahead of that in any other nation, was primarily a product of technological development and rich natural resources. The introduction of the Bessemer process after the Civil War, combined with the rich ore deposits of the Lake Superior region and excellent coking coal, made possible a cheap form of steel. As improvements in technological methods brought continued reduction in costs, the demand for steel increased far more rapidly than the growth in population. The subsequent introduction of the basic open-hearth process made possible the use of ore with a larger phosphorus content, such as was found in Alabama and elsewhere; much the greater portion of steel is now made by this process. One result has been a westward shift in the center of the industry and a rapid growth in the region bordering on the Great Lakes from Chicago, eastward to Buffalo.

Few industries have made greater progress in the introduction of laborsaving machinery; an illustration is an increase of over 3,000 per cent in the blast-furnace output per man between 1850 and 1919. The increased use of machinery has tended to bring about a very much larger scale of production, illustrated again by a decrease of over one-half in the number of blast-furnace establishments since 1899 in spite of the far greater output. There has also been a marked tendency toward integration in the industry so that today the larger manufacturing concerns generally own the sources of their chief raw materials and turn their cruder products into many finished forms. The tendencies toward large-scale production and integration have resulted in marked concentration of control and the largest company now produces around two-fifths of the great staple products. The industry has been so progressive and successful that since the last of the nineteenth century it has been able to compete with the less highly finished products of iron and steel in world markets and a large export business has been developed.

Among the textile industries there was a very considerable growth during this period. Cotton manufacturing remained the most important branch of this group and during the period greatly increased its lead, measured by the value added in manufacturing, over the wool manufacture, which was second in rank. By 1935, when the value added in cotton manufactures reached \$404 million, it was nearly 50 per cent greater than that of the wool manufacture and over two-sevenths of the total for the textile mill industries. An outstanding development of the period was the rapid expansion of cotton mills in the South, chiefly in the

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Carolinas. They tended to specialize in the cheaper grades of cotton goods. Their growth was largely due to the presence of abundant water power, cheap labor, and proximity to the raw material.

In wool manufactures the most significant development was the growth in the output of worsted products. In 1860 this branch of the industry was just starting; in recent years it has used three or four times as much wool as the manufacture of woollens, the latter branch having remained nearly stationary. Since 1860 silk manufacture has enjoyed a greater relative growth than any other branch of the textile industries except rayon—largely caused by the introduction of machine methods aided by high tariff duties. Prof. Taussig inclines to the belief that the conditions in the industry at this period afford a case where the infant industry argument for protection could be applied. But here, as in the case of other textiles, the products requiring a relatively large amount of hand labor continue to be imported. The industry has remained highly localized in Pennsylvania, New Jersey, New York, and Connecticut. The manufacture of knit goods is another branch of the textile industry that has experienced growth almost equal to that of silk. Cotton is by far the most important raw material employed and the manufacture is concentrated largely in New York and Pennsylvania; in recent years numerous mills have been established in the South and in Wisconsin and Minnesota. Starting just before the first World War the manufactures of rayon experienced a spectacular rise and now exceed silk in the value added in manufacturing.

In the textile industry in general, though there has been a decided increase in the scale of production, the tendency toward integration has not been so extensive as in some major industries and, outside of the worsted branch of the wool manufacture and the rayon industry, concentration of control is not marked. The development of this group of industries has resulted in the country's producing a larger portion of its consumption of textiles than ever before; it is only in the cheaper grades of cotton goods that much success has been attained in the export trade.

Among the manufactures of food products the slaughtering and meat-packing industry has experienced some of the most extensive changes in its economic organization. The growth of livestock raising in the trans-Mississippi region and improved transportation facilities resulted in a shifting of the center of the industry to Chicago and later a marked growth at Missouri River points. Along with this there was a rapid decline in the small local slaughtering, a marked tendency toward large-scale production, an unusual development of integration, and a concentration of control over most of the interstate business in four or five dominant concerns. The dairy industry affords another example of the transfer to the factory of work formerly largely done on the farm. In this connec-

tion, too, mention should be made of the great development in the preparation of the innumerable canned foods, an industry almost entirely a product of this period and made possible by scientific and technological advance. The importance of the new methods made available for the preservation of food products is seldom realized. In the milling industry the outstanding developments, aside from improved technological processes, were the growth of large-scale production and the westward movement of the industry, resulting in making Minneapolis the great flour milling center; rather recently there has been some tendency toward dispersion to points in western New York, Kansas, and Texas.

Among other industries only a few can be mentioned where important developments occurred. The manufacture of lumber products, inevitably closely associated with the cutting of timber, has moved southward and westward with the shifts in location of the lumbering industry. The use of wood pulp in the manufacture of paper in place of rags was introduced during this period and has been of great importance in its effect upon the supply of paper. This substitute raw material, combined with improved methods of manufacture, has provided cheap paper and, along with the remarkable development of the printing press, in which the United States led the world, has resulted in an enormous increase in the printing of newspapers, magazines, and books. The phenomenal growth of the automobile industry in the last 35 years has already been noted. The popularity of the product for business purposes as well as for pleasure and the wealth of the country provided a great market; and the cheapness of the main raw materials and the use of methods favoring large-scale production combined to give this country marked advantages for the development of the industry and a decided lead over the rest of the world. The manufacture of clothing for men and women has been characterized by the growing use of factory methods of production, though the advantages thus secured have not been so marked as to prevent an extensive output by the sweatshop with its domestic system of organization or the smaller concern turning out custom work.

Finally, mention should be made of a number of industries turning out various kinds of machines that have proved particularly successful. Among these are typewriters, calculating machines, sewing machines, boot and shoe machinery, printing presses, automobiles, agricultural machinery, sound reproducing machines, and a great variety of electrical machinery. In the manufacture of many of these products, often spoken of as "American specialties," American inventiveness together with cheap raw materials, standardization of products, machine methods, and access to a large market has enabled the United States to lead the world.

Geographical Distribution of Manufacturing. Since 1860 the center of manufacturing as defined by the census has moved westward; it was

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located a little east of Pittsburgh in 1860 and a little northwest of Columbus, Ohio, in 1920. The great manufacturing section of the country is still comprised in the region east of the Mississippi and north of Maryland and the Ohio River. This section turned out over two-thirds of the value of all manufactured products in 1935 as compared with almost four-fifths of the total for 1860. Most of the proportion of the total that this section lost has been gained by the North Central states just beyond the Mississippi, since the figures for the South and the Far West show only a moderate gain. Within the great manufacturing section, however, there has been a decided alteration in the relative importance of different groups of states. Whereas in 1860 the New England states turned out 25 per cent and the group comprising New York, New Jersey, and Pennsylvania 39 per cent of the country's total value of manufactured products, by 1935 their proportions had fallen to 9 and 28 per cent respectively; the figures for the group of five states north of the Ohio and east of the Mississippi had risen during these years from 15 to 32 per cent.

The westward movement of manufacturing has been due to the opening up of the West and the resulting increased supply of various raw materials obtained from this region along with the growth of markets provided by the westward movement of population. An analysis will show that such manufactures as experienced a marked development outside the older manufacturing states along the North Atlantic coast were lines where nearness to raw material or to market were relatively important considerations. Generally speaking they were likely to be branches of manufacturing that did not turn out the most highly finished products. Products of the latter type are still more commonly produced in the original center of manufacturing.

It should be noted that the very fact that the North Atlantic states had an early start in so many lines of manufacturing gave them during this period a certain advantage, of varying importance in different lines of manufacturing, over other sections of the country that tended to check the decline in relative importance of this region as a manufacturing center. It is obvious, however, that in the future as manufacturing develops elsewhere the influence of this advantage will steadily decrease. Present tendencies indicate that the great Middle West, particularly the northern portion extending from western Pennsylvania to the Missouri River, is likely to remain the greatest manufacturing section of the country, though an appreciable relative growth may take place in the South and on the Pacific coast.

The Main Factors in the Growth of Manufacturing. In 1860, though developing rapidly, the United States was still relatively backward as a manufacturing nation. Today its output of manufactured products is vastly greater than that of any other nation; only a small fraction of the

manufactured products that it consumes is imported; and its exports of such products far exceed the value of its imports. During this brief period its economic life became industrialized and in the field of manufacturing it has become self-sufficient to an unusual degree. It remains for us to try and analyze the forces and conditions responsible for this remarkable development.

As previously pointed out, such an analysis must start with a study of the various factors affecting costs of production. In the early period of our history, as has been seen, the chief advantage possessed was the cheapness of such raw materials as the country produced; the chief disadvantages were the high cost of labor and capital. During the period under review important changes occurred affecting the relative costs of these chief factors in production. The available supply of raw materials was enormously increased, both in quantity and variety, by the opening up of new sources or the introduction of better methods in the use of old sources, and new methods of production and transportation tended to lower the cost of such supplies. Though a less important factor relatively than in earlier times, the abundant, varied and cheap supply of raw materials may still be considered one of the chief bases, if not the chief one, of American manufacturing. We must face the fact, however, that because of the depletion of our natural resources the time will come—in fact, already has come in certain cases—when for some of them this advantage will disappear.

The most serious disadvantage in early times was the lack of an adequate supply of labor, especially skilled labor. As will be explained in more detail in the subsequent chapter dealing with labor, some progress was made in increasing the supply available for manufacturing. Immigration brought in many workers who went into the factories and, as the supply of free land disappeared, the counter attraction of independent farming declined in importance; meanwhile the general drift to urban centers helped to augment the number of factory hands. In spite of these and other developments, labor still remained relatively scarce in the United States as compared with most other countries. Wages continued relatively high and, although high wages per hour or per day do not necessarily mean high labor cost per unit of product since greater efficiency may more than offset the high wages, it is generally found that the efficiency of labor alone is not sufficiently great to do this. To this day the high cost of labor remains the most serious general disadvantage that the country faces in the development of such lines of manufacturing as have to face foreign competition. The great development that took place during these years was not due to any marked success in reducing the general cost of labor but rather to the introduction of a more efficient substitute in the form of capital—the laborsaving machine.

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Undoubtedly the tremendous progress made in the introduction of machine methods of production, which enabled manufacturers to dispense with much labor and to offset such high labor costs as still existed by low costs on account of machinery, was one of the most far-reaching changes promoting the expansion of manufacturing.

The substitution of machinery for labor increased the amount of capital employed, and capital had also been relatively scarce in this country and its cost in the form of interest high. During this period, however, the extent of this disadvantage was fast dwindling. Within the country capital was accumulating at a rapid rate and the growing inflow of foreign capital tended steadily to lessen the difference existing between interest rates in this country and in western Europe. By the opening of the twentieth century the difference was slight; since the first World War it may be said to have disappeared or even shifted in favor of the United States. Today the manufacturer can obtain capital in this country on as favorable terms as anywhere else. It is obvious that, in view of the far more important part now assumed by capital among the factors of production, the decline and final disappearance during this period of the former disadvantage of high cost of capital have been factors of great significance in our manufacturing development.

Concerning the cost of the fourth factor of production, business management, it is difficult to speak with definiteness. It has been stated that in the colonial period, with small-scale industry and rather simple problems of management, the country was under no appreciable disadvantage. In the course of the nineteenth century the unusual opportunities for the successful development of business enterprises provided by the rapid growth of the country, together with the energy, resourcefulness, and spirit of enterprise of businessmen and the conditions favorable to individual initiative, helped to develop a group of entrepreneurs which by common consent is unsurpassed in any other country. In efficiency the American captains of industry can compare favorably with any others. By the aid of so-called American methods of business organization, their ability has been a contributing factor in the successful development of our manufacturing industries.

In addition to the conditions determining the relative cost of the different factors of production the extent of the market is another factor affecting the development of manufacturing. The lack of an extensive market for many products in colonial times was not a serious disadvantage under the small-scale methods of production that then prevailed. With the advent of the factory system a large market became important. Hence the significance of the fact that during the period under review, as far as a domestic market is concerned, the American manufacturer secured the advantage of the greatest market to be found anywhere in the world.

This is a product not only of the increase of population but of the great growth in per capita national wealth and income. It should be noted, moreover, that this great market is especially important for, and in no small measure explains the growth in, the lines of manufacturing in which the United States has been notably successful, typically lines where machine methods are extensively employed and where, in consequence, large-scale production is essential to secure production at the lowest cost.

Manufacturers are not necessarily limited to domestic markets. Lowered transportation costs together with the growth in population and wealth of the whole world have greatly widened the accessible markets; such developments, of course, have made these markets, along with those in the United States, available to foreign competing manufacturers as well. However, access to foreign markets is always somewhat limited by transportation costs and commonly is further limited by tariff barriers or other obstacles. The policy of high protection, which has generally prevailed since the Civil War, has tended to retain the growing domestic market for American manufacturers; the general reaction toward higher tariff barriers in other countries has similarly tended to limit the market in such countries to domestic producers. Furthermore, our geographical distance from competing manufacturing countries and the very size of our country, tending to increase the costs of transportation from seaports to inland markets, have provided added protection for the domestic manufacturers. Thus, although the extent of the domestic market is not by any means the measure of the economically accessible market, it has been decidedly the most important factor, generally speaking, at least in the case of the United States.

Thus far the analysis of the advantages and disadvantages in relative costs of our manufacturing has proceeded on the assumption that all manufactured products could physically and economically be transported from country to country and enter into international trade. Such being the case, the conditions determining relative costs of production in different countries would provide the fundamental explanation for the growth of manufacturing in the United States during this period, that growth being a product of the working out of the law of comparative costs, except as this was modified by tariffs or other limitations on freedom of trade. All the improvements in transportation making it easier, both physically and economically, for commodities to enter international trade, to say nothing of other improvements in marketing facilities, have tended to bring an ever increasing volume of products under the operation of this principle governing international trade, even though in part offset by the spread of protectionism. Had transportation and marketing conditions remained such as they were in 1800, the preceding analysis

would play a far less important part in explaining this development of manufacturing.

Nonetheless, it is true that many manufactures are of such a nature, physically or economically, that they cannot be transported any appreciable distance and, hence, are produced, if at all, within the country where they are consumed. We have seen that this was an important factor in the growth of manufacturing in the colonies, even though but a small portion of the population was living any appreciable distance from tidewater. Today most of the population lives at a much greater distance from tidewater, but this condition has been more than offset in the case of most manufactured products by lowered costs of transportation. There still remains an appreciable volume of manufacturing of necessity carried on near the place where the product is used. The growth of such lines of manufacturing during this period is obviously to be explained primarily by the growth of population and wealth. Mere growth of population would explain the increase in output of such of this class of manufactures as are considered necessities. In the case of products for which the demand is more elastic the various developments previously discussed, tending to lower the costs of production, together with the rising standard of living made possible by the growth in the per capita national income might also be an important factor in expansion. Though this general class of manufactures was doubtless considerable, it steadily declined in proportion of the total, owing to the widening of the market. Hence the chief explanation for the rapid growth of manufacturing in the country after 1860 is to be found in the changes favoring lowered costs of production as explained in the first portion of our analysis.

CHAPTER XXXV

LABOR CONDITIONS SINCE 1860

Introduction. In spite of the growth in population and other factors tending to increase the supply of labor, the rapid economic development of the country created a demand that fairly kept pace with the growing supply. In consequence the relative scarcity of labor that had characterized the country from the start may be said to have continued throughout this period. Of course a shifting number of unemployed was always to be found and in times of business depression, as in the years following 1929, it mounted to an appalling figure. Even then, legislation and the various measures for public relief, by checking the desperate struggle for jobs by those facing starvation, provided an artificial support for the wage rate structure sufficient to keep the money wage rates at a level distinctly above that prevailing in other countries. However, labor could still be called relatively scarce, since its cost per unit of work done was generally higher than in most countries. This, as theretofore, helped to maintain relatively high real as well as money wages, and thus a relatively high standard of living among the mass of the people—at least among such as had full employment.

The decline in the importance of agriculture as compared with manufacturing, trade, and transportation caused a growing proportion of the working population employed in the latter groups of activities to be subject to the economic and social conditions that such employment entailed. These conditions, especially in manufacturing industries, were undergoing rapid changes during this period with the spread of the factory system and large-scale production, and greatly altered the conditions surrounding work—sometimes for the better, sometimes for the worse. In the latter case they created new problems that necessitated some form of action to lessen the resulting evils. In time extensive legislation was enacted to meet some of them. More important was the effort of the workers to improve their condition by united action, resulting in a great impetus to the organized labor movement. The issues thus created became so widespread and so vital as to make the labor problem one of the most serious of the social problems of the day. It will be one purpose of this chapter to try to indicate the general historical background of these developments.

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Factors in the Supply of Labor. The first factor entering into the determination of the labor supply is the country's population. The growth of that population during this period, through both natural increase and immigration, has already been described. The total number of persons ten years of age and over engaged in gainful occupations as returned by the Census of 1930 was over 48,800,000 or 50 per cent of the total population of that age. Complete figures for 1860 are not available but for 1870 the corresponding figure was nearly 12,500,000 or 44 per cent of the total population of that age. It is to be noted, however, that the peak in the percentage figure, 53.3 per cent, was reached in 1910, and that the decline after that was due chiefly to prolonging the period of training for the young and in part to retirement, either voluntary or enforced, among the oldest age group.

Such changes as have occurred in the proportion of the total population that was employed are a product of various factors. The general spirit of work which characterized the American people in the past has probably continued, at least until rather recently, without much change. There are indications that among the well to do it has somewhat abated; in this group today we find more men who are content to retire from business at an early age than formerly or who, although still active in business, are inclined to take more time off for recreation, travel, and rest, or for devotion to philanthropic and social activities, than used to be the case. Although in part this may reflect a reaction from the intensity and strenuousness of the modern business world, it is also true that purely business activities seem to play a slightly less predominant part in the life of this group and that, with growing breadth of interests and culture, nonpecuniary activities play a larger part in their life. However, the group thus affected is still extremely small. That a similar tendency toward early retirement among the masses will result from the recent social security legislation is obvious.

A more important change tending to decrease the proportion of workers to the total population is found in the smaller proportion of children gainfully employed in recent years. Thus in 1910, when the peak in the absolute number was reached, there were nearly 2 million children from ten to fifteen years of age returned as gainfully employed, or almost one-fifth of the total population of that age; in 1930, the total had fallen to 667,000 or less than 5 per cent of that age group. Of the total at the latter date 70 per cent were employed in agriculture, mostly on the home farm, and only 10 per cent in manufacturing. Were comparable figures available, they would show also a decline in the proportion of those employed in the age group just above 15 years, though it would be much less marked, especially as the high-school age is passed. This decrease in the proportion of the labor supply obtained from children is a combined

product of the prolongation of the period of education and the progress in child labor legislation.

A yet more important change, tending to increase rather than to decrease the proportion of gainfully employed among the total population, has been the entrance of women into numerous lines of work that formerly either did not exist or were not generally open to them. Out of 534 occupations listed in the Census of 1930 there were only 30 in which there were no women. At that date nearly one-third of those employed were in domestic and personal service and around one-sixth each in clerical work and in manufacturing. In a great many cases, of course, this did not mean that more work was done by women but rather that an increasing proportion of them worked for pay outside the home instead of working for nothing about the house. The work of women in the home, not being on a pecuniary basis, results in their not being counted by the Census among the "gainfully employed"; and the services rendered there and the things thus produced are not commonly included in the statistical estimates of the national income. It must be emphasized, nonetheless, that all the labor of this group, so commonly ignored, represents what is in fact a very important contribution to the economic resources and well-being of the country.

The marked tendency for women to enter gainful occupations is reflected by the fact that in 1880 only 14.7 per cent of all females ten years of age and over were engaged in gainful occupations; in 1930, 21 per cent were reported as gainfully employed, an increase in the proportion of substantially 50 per cent. During this period the proportion of males ten years of age and over, returned as gainfully employed, remained practically unchanged at about 79 per cent of the total. As a result the rate of increase in the absolute number of women gainfully employed, during the half century ending in 1930, was over 300 per cent or almost twice the rate of increase among males gainfully employed. The chart on page 720 shows by age and sex groups how the total gainfully occupied portion of the population was constituted in 1930.

The opening up of many new lines of work for women has been of importance in several ways both for the sex and for society as a whole. For the sex it has provided vastly greater opportunities to secure economic independence and with that have come greater freedom in every way and increased chances for self-development and self-expression. In short it has helped to broaden the whole life of the sex. For society it has meant a greater use, at least outside the home, of all the potential capacities of women, social as well as economic, for contributing to the life of the nation, so many of which remained undeveloped or wasted in a society that so narrowly circumscribed the activities of the sex as did that of most of the nineteenth century.

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Thus far we have been considering only the factors that affected the number of people who worked. The labor supply is also affected by hours of work per year, the intensity, and the quality of the work. The changes in the length of the working day will be discussed in more detail later. Here it will suffice to note that there was a general tendency to shorten

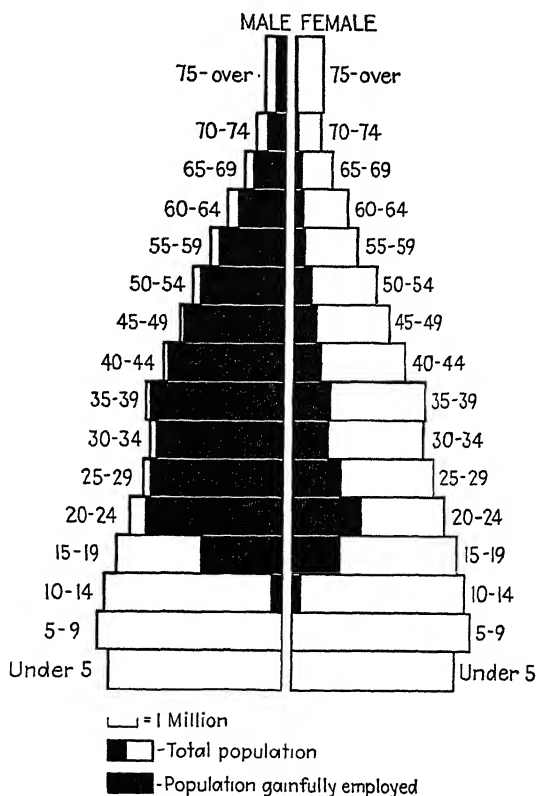


FIG. 51.—Total population and population gainfully employed by sex and age groups, 1930.

the working day in practically all lines of activity. Perhaps as nearly accurate a general statement as can be made would be that in 1860 the average working day was slightly over 11 hours; by 1890 it had been reduced to about 10 hours and by 1930 the typical American workingman had about three hours less of daily toil than did his grandfather. To what extent the additional cuts during the succeeding depression are likely to prove permanent remains to be seen. But besides the reduction in daily hours there has been that in the number of days of work per week or per year. One day of rest in seven has become general, a half day off on Saturday is given in a growing number of occupations, and a few trades

have a five-day week. In the course of the year the greater number of holidays and the growing practice of granting a week or two for vacation, often with pay, have further increased the free time of workers. Another, though unfortunate, feature tending to lessen the yearly hours of labor has been the growing loss of working time through strikes and lockouts. It is also probable that the loss through unemployment in times of business depression is greater than formerly.

It must not be assumed that the reduction in the hours of labor has necessarily decreased the amount of work accomplished; indeed, up to a certain point, it has often had the opposite effect. Along with this reduction, in part a cause of it, has come a decided increase in the intensity and speed of work. Chiefly responsible for this is the greater use of power-driven machinery, itself tireless, but setting the pace for the worker. Yet this is only one of many developments, such as specialization and the devices of scientific management, that have tended to eliminate the more leisurely pace of the business world of a century ago and have reacted upon administrative officials as well as on the wage earners in all lines of business. In some instances this has been partly counteracted by the policy of restricting output, adopted by certain of the trade-unions. The strain of the modern pace would make the long hours of earlier generations impossible in many fields of work. Yet the output per worker has generally increased and the worker himself has more free time for such use as he chooses to make of it.

There remains for consideration as a factor affecting the supply of labor its quality: the skill, intelligence, and other traits of the worker which may be just as important as the number of workers and the hours and speed of work. First, however, it should be noted that the spread of machine methods of production has resulted in what has already been spoken of as the transfer of the need of thought, skill, and intelligence from the worker to the machine. Tasks that formerly involved considerable manual skill and dexterity on the part of the worker are now performed by a machine, the guidance of which may require relatively little skill or intelligence on the part of the attendant. Also, the tendency toward division of labor has so simplified the tasks performed that many require only a very brief period of training to attain proficiency. It is obvious that in a country where the supply of skilled craftsmen had been relatively scarce these changes have proved most advantageous.

Despite these changes, there still remained many crafts where skill was required. On the whole this need was met with better success than in the earlier period of the country's development. For the most part the training was provided by a period of apprenticeship though, outside of a few trades where the unions were strong and set up definite standards, this tended to become informal in character and of uncertain duration.

In recent decades increased attention has been given to the training of workers by employers and through the spread of trade and technical schools. Although the United States today is less deficient in its supply of skilled labor than formerly, it is still true that in many crafts, particularly those requiring considerable manual dexterity, it is at somewhat of a disadvantage as compared with other countries. On the other hand, as far as energy, initiative, adaptability, ingenuity, and general level of intelligence of the working class are concerned, the country has, if anything, an advantage over other nations.

Progress in General Education. Though primarily significant for its general social effects and, of course, not confined in influence to the laboring class in the narrow sense of the term, general education is of great importance, even from the purely economic point of view. This was a field where, during these years, building in the main upon foundations laid during the preceding period, notable progress was made.

In the decades immediately following the Civil War one of the chief lines of advance was in teaching methods and the training of teachers, resulting in a rapid growth of normal schools. European ideas, particularly those of Pestalozzi, Froebel, and Herbart, were studied and, in more or less modified form, widely adopted. Later, the advance in psychology provided a sounder basis and gave a new stimulus to the study of pedagogy which, aided by far greater facilities, was carried on more actively than ever before. In teaching, the old method of simple recitation and cramming the student's mind with mere facts was increasingly displaced by methods designed to stimulate his interest and thought, develop the full mental capacity of the student, and better fit him to meet the numerous problems of living in the modern world and to contribute to social progress. The curriculum of the elementary school was considerably broadened through the addition of such subjects as literature, modern languages, history, science, domestic science, the arts, and physical training. Finally, the kindergarten was introduced, from 1855 to about 1880 spreading slowly as a private institution; after 1890 it was rapidly adopted as a part of the public school system. Still more recent has been the move to provide suitable education for children of retarded and defective development.

In secondary school education the outstanding features during this period were the growth of the high school, the expansion of its curriculum, and the tendency to provide more specialized courses. The growth of the public high school, which practically displaced the old academy, did not become very marked until after 1880 at which date there were about 800 in existence. By that time the importance of providing free secondary school education was generally recognized and from then on the growth in the number of public high schools, as well as in the attendance, pro-

ceeded at a very rapid pace till in 1934 there were nearly 25,000 such schools with about 7 million pupils. Between 1890 and 1930 the enrollment of students in the secondary grades virtually doubled every decade. The old three-year course was extended to four years. The curriculum was greatly enlarged, not only in the more purely cultural subjects but even more in those looking towards some field of vocational training. Special high schools were established to prepare for some particular line of work such as business, technology, agriculture, or domestic science.

Almost as remarkable as the development of the high school was that of higher education as represented by the colleges and universities. In many respects this development was along similar lines. The growth in the popular demand for higher education resulted, especially after about 1890, in a remarkable expansion of the state-supported universities, the establishment of which had been stimulated by the Land Grant Act of 1862, and the private institutions received gifts on a scale unparalleled in the history of philanthropy. The spread of coeducation, together with the growth of colleges for women, for the first time opened to that sex advanced educational opportunities equal to those available for men. The old curriculum based on traditional classical lines was greatly expanded, much greater freedom in the choice of subjects was permitted, and specialized courses designed for vocational or professional training were extensively developed. Moreover, there was a marked tendency for those preparing for the professions to carry on most of such training in post-graduate work after the broader and more cultural background of an undergraduate course had been secured. Mention should also be made of the development of extension and correspondence work, by private enterprise as well as by the colleges, the increased opportunities provided for evening courses, the quite recent tendency of city high schools to extend their course to cover the first two years of college work, and the greater provision for adult education.

There is no very satisfactory basis for measuring in quantitative, to say nothing of qualitative, terms the remarkable advance in general education that was made during this period, but some figures available are most suggestive. By 1930 the proportion of illiterates in the total population ten years of age and over had been reduced to 4.3 per cent as compared with 20 per cent in 1870. The census returns indicate that, in 1860, 47.5 per cent of the population from five to twenty years of age inclusive was attending school. Up to 1900 the increase in this percentage was slow but by 1920 the figure reached 65.5 per cent. Much more striking was the advance in the amount of education obtained by the average American, for it is estimated that the average number of days of school attendance secured by those who became twenty-one years of age rose from 434 in 1860 to 1,590 in 1930, an increase of 268 per cent.

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The really phenomenal growth in the provision for secondary school education during the last half century is best indicated by the fact that in 1890 only one in fifteen of those fourteen to seventeen years of age in the population was enrolled in high schools, whereas by 1934 two out of every three in this age group were so enrolled. Although the increase in the proportion of those eighteen to twenty-one years of age enrolled for some type of college work is not quite so striking, it rose from one out of every twenty-five in 1900 to better than one out of every eight in 1936.

The trend of development in education just outlined was of course closely bound up with changes taking place in many phases of social life. Among the motives for providing greater opportunities for education the sectarian religious motive was distinctly less prominent than in earlier periods. The desire to educate the youth so that they could vote more intelligently and thus ensure a sounder basis for our democratic institutions continued to receive great emphasis, all the more so when the Negro was freed from slavery and immigrants came to the country in ever increasing numbers. More marked, however, was the broadening of the conception of what is important for good citizenship, which is to be seen in recent years. Not only was ability to vote intelligently insisted upon but a development of all the capacities and ideals that would enable the individual to contribute to the social well-being of the country. The whole period was marked by the growing acceptance of the belief that education was essential to progress, not only along economic and political lines, but in every phase of the social process. Furthermore, as this belief spread, the democratic ideal of greater equality of opportunity led to a growing insistence that the chance to secure an education be made available to all. Finally, the rising standard of living, resulting in a broader outlook upon life's possibilities, tended to create a greater and more general desire for education, not simply as a means toward greater success in earning a living, but also for the cultural values that contribute to the enduring satisfactions of life.

The very growth of knowledge itself, which was both a cause and a result of greater educational facilities, particularly the research carried on in the large universities, tended to make education more and more a necessity; for the individual or nation that lacked this knowledge was thus placed under a steadily increasing disadvantage. As knowledge accumulated, greater specialization became necessary in order to master that which was available even in a limited field. This also resulted in a prolongation of the period of training, most marked in the learned professions. As a growing proportion of the youth of the country entered the high schools and colleges, the demand for vocational professional training increased, since many of the groups then coming to secure advanced education either did not desire the old purely cultural studies or felt that,

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since they did not have the time or money to obtain both a liberal arts course and a vocational course, the latter was more essential. Such a tendency was to be expected, but it does not necessarily mean, as some have feared, that the more cultural studies were being neglected. Un-

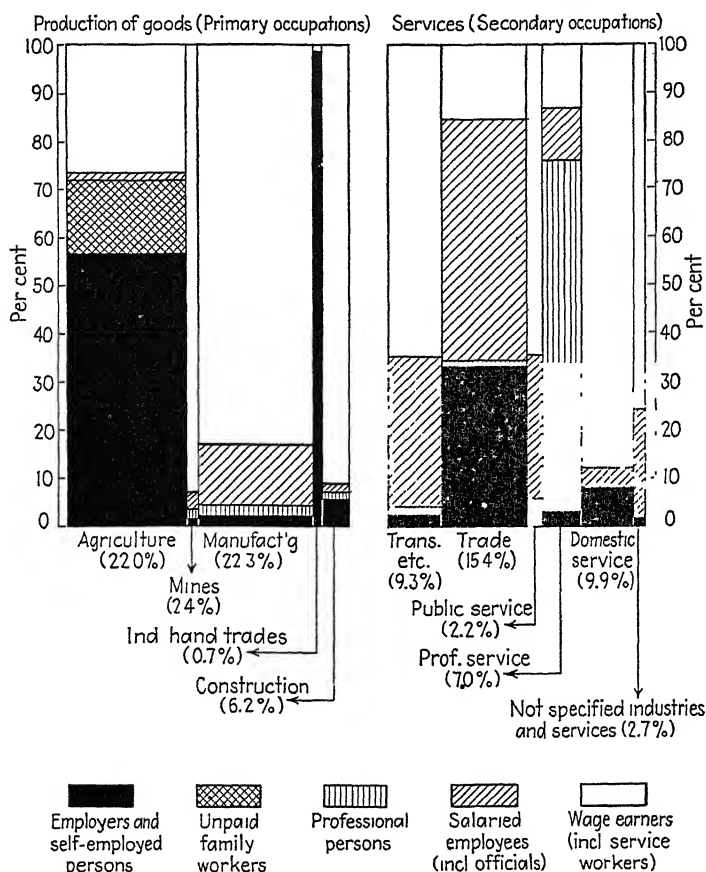


FIG. 52.—Distribution of gainful workers in various industrial divisions by class of work, 1930. (Reproduced from W. S. Woytinsky, "Labor Supply of the United States," by permission of the Committee on Social Security.)

doubtedly a larger portion of students than ever before are now obtaining some training in such studies, and those who choose the narrower vocational course rather than drop out of school are increasing the chance that their children will not only desire, but be able, to obtain a broader cultural education.

Distribution of Workers by Occupations. The changes that occurred in the various lines of economic activity of the country during this period were naturally reflected in the occupational pursuits of the people.

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The distribution of all those engaged in gainful occupations at the Census of 1930 is shown on the chart on page 725. A second chart on this page based on a somewhat different classification (the chief difference consisting in not segregating clerical occupations) indicates the shifts during the century preceding 1920. Although changes in classification

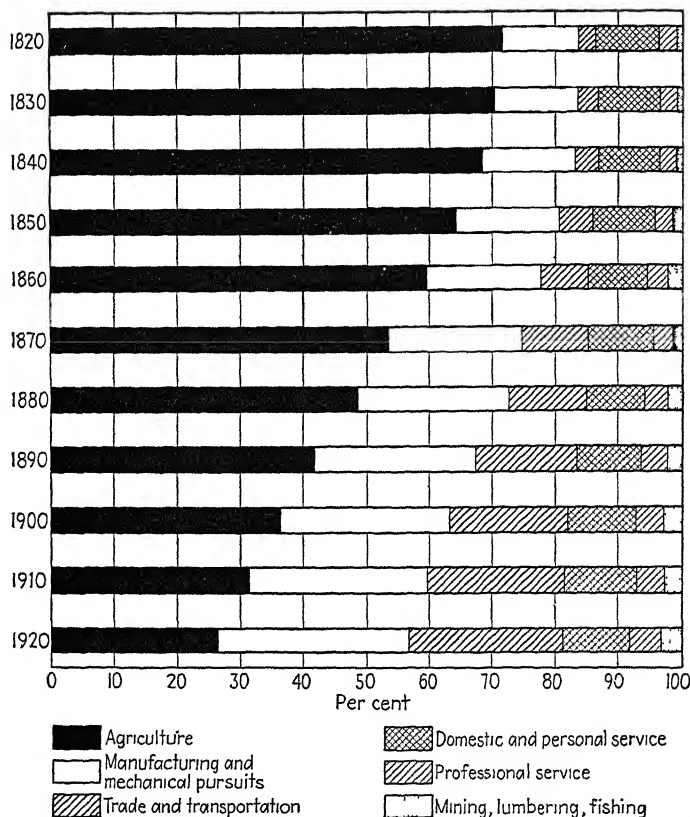


FIG. 53.—Percentage distribution of persons engaged in gainful occupations, 1820–1920. (Based on figures of P. K. Whelpton, *Journal of the American Statistical Association*, 1926.)

make strict comparison of the 1930 figures with those earlier years difficult, certain general shifts in occupations during the period since 1860 are clear. The outstanding change is the decline in the proportion of the gainfully employed to be found in agriculture and the rise of that in manufacturing. In 1860 less than 20 per cent were engaged in manufacturing and the mechanic arts and nearly 60 per cent in agriculture. It was not until 1920 that the manufacturing group came to surpass the latter; by 1930 it included 29 per cent of the gainfully employed as compared with 21 per cent in agriculture and thus reflected the rapid industrialization of the nation during this period.

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The most important among the other changes is the rapid increase in the group in trade and transportation, which strikingly illustrates how much more time and resources have been devoted to the process of exchange in order to secure the advantages of specialization and division of labor. Though small in absolute numbers the group engaged in the professions also shows a high rate of growth, similarly indicative of the trend toward specialization. Both absolutely and relatively, there has been a marked increase in the number engaged in clerical occupations. In general, the proportion of those engaged in the primary production of goods has declined relative to that engaged in trade, transportation, and the various other service occupations.

Thus far we have been considering distribution by occupational pursuits of all the gainfully employed, regardless of whether the individual was a wage earner or the head of a large corporation. For various purposes it is important to classify the gainfully employed along lines that will give a better idea of the economic status of different groups and convey a clearer impression of what constitutes the laboring class in the more usual sense of that term. Since they provide a comparison covering most of this period, some figures secured by Prof. Hansen in an attempt at such a classification and based on census returns are given in the following table:¹

	Absolute number (000 omitted)		Percentage of total	
	1870	1920	1870	1920
Farm laborers.....	2,885	4,178	23.1	10.0
Farmers....	3,000	6,463	24.0	15.5
Proprietors and officials	581	3,168	4.6	7.6
Professional.....	414	2,760	3.3	6.6
Lower salaried.....	309	3,985	2.5	9.6
Servants.....	975	1,270	7.8	3.1
Industrial wage earners	3,328	17,648	26.6	42.4
Unclassified.....	1,010	2,138	8.1	5.1
Total	12,502	41,610		

As was to be expected, the outstanding trends shown are the decline in the proportion of farmers and farm laborers and the increase in the proportion of industrial wage earners; the latter had in 1920 nearly as large a proportion of the total as the farming group had in 1870, while the

¹ See articles in *Publications of the American Statistical Association*, December, 1920, and December, 1922, where a more detailed explanation of the basis of classification can be found.

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proportion of the farming group in 1920 was even less than that of the industrial wage earners in 1870. Among the smaller groups the decline in the proportion of servants is most striking; doubtless much of this reflects merely a transfer of some form of domestic service from the home to other places. The growth of the professional group, here made a broadly inclusive group, reflects the growing need for specialized experts. The increase in the lower salaried class reflects the growing number of occupations where the work is apt to be less purely manual in character. The growth in the percentage of the proprietors and official class may perhaps indicate that outside of agriculture the opportunities for securing independent or responsible positions are increasing rather than declining, as is so often assumed.

The figures given in the foregoing table enable us to make a rough estimate of the proportion of the gainfully employed that makes up what may be called the laboring class in the commonly accepted sense of the term, that is, those having relatively subordinate positions and receiving wages or a low range of salaries. The following groups as listed in the table may be included in this class: farm laborers, industrial wage earners, servants, and the lower salaried group. In 1870 these four groups made up 60 per cent, and in 1920, 65 per cent, of the gainfully occupied people. Omitting the unclassified, the three remaining groups of farmers, professionals, and proprietors or officials made up nearly 32 per cent and 30 per cent of the total, respectively, at these two dates. It should be noted that nearly all of the gainfully occupied who are between ten and nineteen years of age inclusive (a total of over 5 million or about one-eighth of all gainfully employed) are doubtless included in what has been called the laboring class, even though their parents may not belong to that class. The most important case of this type is the farm laborers where nearly one-half of the group works on the home farm and is mostly made up of the farmer's own children. This tends somewhat to exaggerate the proportion that is ordinarily thought of as the permanent laboring class, even though partially offset by possible deductions from those included in the employing or professional class. The important conclusion to be drawn from these figures is that in 1920 there was approximately one individual who was in a position of relative economic independence as an entrepreneur, official, or professional man for every two who were in subordinate positions as wage earners or among the lower salaried group. In short, the subordinate group was by no means so large a proportion of the total as is very commonly assumed.

To bring the picture as nearly as possible up to date and stress more recent trends, as well as to provide a somewhat different classification of workers, the following analysis of the census figures for 1910 and 1930 prepared by Dr. Edwards will prove instructive:

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SOCIAL-ECONOMIC GROUPS GAINFULLY EMPLOYED¹

	Percentage of total	
	1910	1930
Professional persons	4 3	6.0
Proprietors, managers, and officials	22 5	19.8
Farmers (owners and tenants)	16.1	12 3
Wholesale and retail dealers.....	3.3	3 7
Others	3.1	3.8
Clerks and kindred workers.....	10.0	16 3
Skilled workers and foremen. . . .	11.4	12.9
Semiskilled	14 4	16 3
In manufacturing	9 6	9 3
Elsewhere	4.8	7 0
Unskilled.....	37.3	28.7
Farm laborers	16.3	9 0
Factory and construction.....	7.0	6 9
Other laborers	7.4	5 9
Servants	6 7	6 8
	100 0	100.0

¹ EDWARDS, ALBA M., *A Social-Economic Grouping of the Gainful Workers of the United States*, p. 7, Bureau of the Census, Washington, 1938. See also, WORTINSEY, W. S., *Labor Supply of the United States*, Washington, 1936.

As here classified it will be seen that independent entrepreneurs, professional men, and officials made up a quarter of all the gainfully employed, though half of this group was engaged in farming. Unskilled workers constituted only a slightly larger proportion in 1930; in 1910, it had been much larger. On the other hand each of the three intermediate groups of semiskilled, skilled, and clerical workers, especially the last, increased in relative size during this interval and together embraced nearly half the total in 1930. These changes reflect a very significant tendency to decrease the amount of unskilled work required and a widespread move on the part of workers out of the lower group into one or another of the generally better paid occupations among the semiskilled, skilled, or clerical workers that made up the intermediate group. By 1930, therefore, the great bulk of the gainfully employed in this country was to be found in this intermediate group; the remainder was almost equally divided between the unskilled laborers at the bottom and the self-employed or managerial group at the top.

In recent years so much attention has been devoted to what is called the struggle between labor and capital that it is desirable to see what light the figures in the table on page 727 throw on the relative importance of these two economic groups. It is impossible to draw any hard and fast line sharply differentiating these two groups from one another or from

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those outside either group which may be said to make up the general public.¹ Both economic status and conflicts of economic interest need to be considered. Probably the group of industrial wage earners is the only important one in which, as a whole, the economic reactions are those of the laborer in opposition to what is called capital. Only a minor portion among the groups of farm laborers, servants, or lower salaried "white collar" class find themselves in direct conflict with capital. The only group that as a whole reflects the interests of capital is that made up of proprietors and officials, though there would be many exceptions even here. Probably some farmers, chiefly the sharecroppers and tenants, and some from the professional and lower salaried class share a similar point of view. Doubtless the great majority of the five groups, listed under the headings of farmers, farm laborers, professional, lower salaried, and servants, have economic positions and interests that differ in greater or less degree from those of either labor or capital and may be said to constitute the general public. Thus a rough guess, for nothing pretending to accuracy is possible, would be that labor makes up something less than half the gainfully employed, that capital is represented by between an eighth and a twelfth, and that something more than a third falls outside of either group.

The most important fact to be drawn from this discussion is the existence of this large third group making up the general public. Far too frequently current discussion assumes that there are but two economic groups in our industrial society, labor and capital, and that the lines between them are sharply drawn and their interests always opposed. In the first place, this assumption exaggerates the degree of homogeneity and unity of interests that exist among each of these two groups; labor has its aristocracy as well as capital and there are numerous issues over which conflicts arise within each group. In the second place, the existence of this large third group is of the greatest social importance. It is a mediating factor in our political, economic, and social life between the opposing forces of labor and capital and, as such, it tends to lessen the sharpness of conflict, to give greater stability to the social order and, even if slowly, to further social progress.

But this very fact makes it important to note that the group that makes up the general public seems to be declining as compared with the other two groups. This is primarily due to the decline in the relative importance of agriculture and the growth in importance of manufacturing, as a glance at the percentage figures for 1870 and 1920 will show. Were similar figures for a century ago available for comparison, the change would be far more striking. Moreover, it is obvious that, since the supply of free fertile land, a factor which until the end of the nineteenth century

¹ See discussion of this point in the article by Hansen referred to above.

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helped to stimulate the growth of agriculture, has practically disappeared, the decline in relative importance of the farming population, a class which constituted the largest element in this third group, will probably proceed at a more rapid pace.

Thus, in spite of some minor counteracting tendencies, we may expect that in the future a growing proportion of the population will be found in

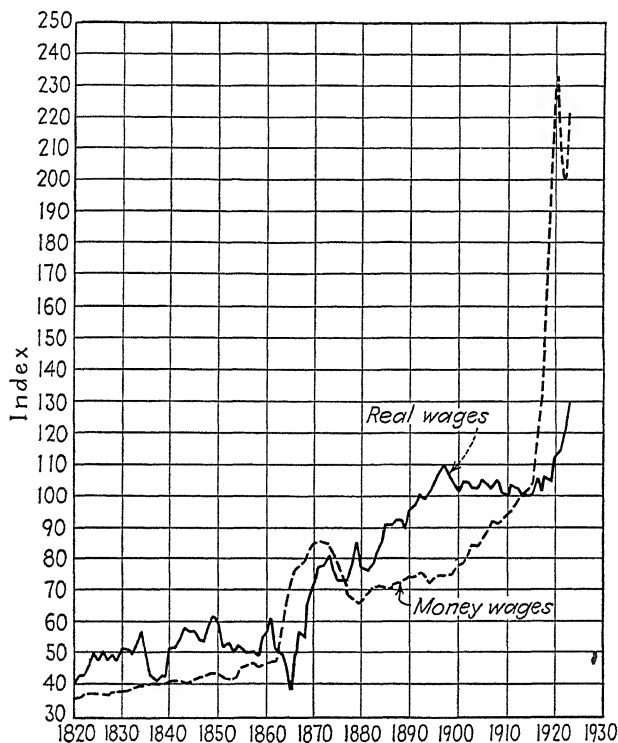


FIG. 54.—Index of weekly money wages and of real wages, 1820–1923. 1913 = 100. (Based on figures of A. H. Hansen, *The American Economic Review*, 1925.)

the groups of labor and capital, tending to broaden and to accentuate such conflicts of interest as arise between the two. The declining importance of the third group, which makes up the general public, will lessen its influence as a mediating and stabilizing social force. But, for the present, this third group still constitutes a most important influence that should not be overlooked.

The Trend of Wages. We now turn to a survey of the changes that occurred during this period in the economic conditions affecting the laboring class, and take up first the changes in wages. The above chart, giving an index number for weekly money wages and real wages, pro-

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vides a summary view of the trend of events during this period.¹ The index number for real wages, of course, reflects the changes in the purchasing power of the money wage as altered by changes in the cost of living due to fluctuations in the general level of prices. It does not, however, allow for changes in the annual income of laborers due to greater or less employment.

It will be seen that the rise in money wages which began during the Civil War continued up to 1872, at which time the level was about 90 per cent above that of 1860. The depression of the seventies resulted in a decline to 1880, but the new level established was at least a third above that which prevailed just before the war. From then on until the close of the century no marked change occurred; the gain made was maintained in spite of a steady decline in the general price level. From 1900 on to the outbreak of the first World War money wages increased a third and raised the level to more than twice that of 1860. Again, war and the economic disturbance attendant upon it brought sudden changes: money wages increased 132 per cent from 1913 to 1920. In the reaction that followed the drop in wages was slight, considerably less than in the case of the general price level, so that, just as after the price readjustments following the Civil War, the new general wage level established showed a decided increase over the prewar level. In this case it was double the 1914 level and nearly five times that which prevailed just before 1860.

It is of interest to note what this meant in absolute terms for different classes of labor. In the case of farm labor wages closely followed the general trend. In 1860 male farm laborers were getting about \$10 a month with board while a much smaller group hired by the day received 90 cents a day outside the harvest season. During the last two decades of the century the monthly wage with board ranged between \$12 and \$14 but, in the course of the following decade, advanced to about \$20. The rapid rise during the first World War carried the figure up to \$47 a month in 1920, followed by an abrupt drop to \$30, and then a recovery to around \$34 for the remainder of the decade. In the worst year of the depression this was about cut in half but later rose to around \$24. Wages paid to farm labor hired by the day without board increased at a slightly lower rate and ranged around \$2.50 a day in the years just before the depression, after which they fell similarly. As between sections the highest wages prevailed in the Far West and the lowest, about half the former, in the South.

Outside of agriculture common laborers were getting about \$6 a week and artisans not quite twice that amount in 1860. By 1880, after the readjustments following the Civil War, common labor was being paid

¹ Based upon the figures of Alvin H. Hansen; see *American Economic Review* for March, 1925.

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about \$7.50 and artisans \$15 a week and there was only a very slight advance over these figures up to 1900. From then to 1915 artisans' wages advanced absolutely much more than those of common labor, reaching about \$24 a week as compared with about \$12 for the latter; but in the sudden rise during the war years the wages of common labor showed a greater relative gain reaching about \$27 a week in 1920 as compared with around \$43 for artisans. From then until 1930, except for 1921–1922, this new high level was well maintained. The much greater absolute increase in wages of the artisan class since 1860 as compared to that of

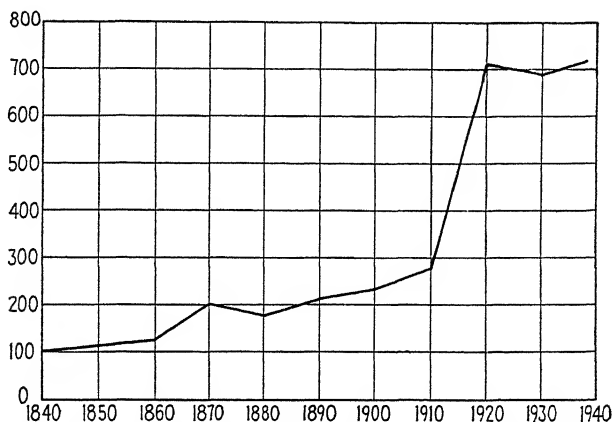


FIG. 55.—Index number of average hourly wage rates, exclusive of agriculture, by decades. 1840 = 100. (From National Industrial Conference Board, *“Studies in Enterprise and Social Progress.”*)

common labor is to be noted and is to be chiefly attributed to the more effective organization of that group.

The changes in money wages are primarily significant as they are related to changes in the cost of living and so determine real wages. During this period, except for the decade of the seventies and, much less obviously, between 1897 and 1919, real wages tended to move inversely with the general level of prices. However, this might be more or less counteracted by greater employment in times of rising prices and more unemployment when prices were rapidly falling. Real weekly wages were practically doubled in the period between the close of the Civil War and 1897. The next period down to 1919, marked by rapidly rising prices, was characterized by an almost stationary condition of real wages, despite a substantial reduction in weekly hours of toil for many groups of workers. The following decade with its sharp drop in prices, while weekly wages were generally well sustained and even advanced, brought an increase in real wages of about one-quarter. As a result the laborer at the outbreak of the depression in 1930 was enjoying a level of real wages

distinctly more than twice as high as that which prevailed just before 1860. When we remember that this gain was achieved along with a very substantial reduction in the hours of work, this result can probably be considered the greatest achievement among the changes that took place in the organization of industrial society during this period in the effort to supply more completely our economic wants. Unfortunately it must be added that despite all this achievement the results fell far short of what was considered essential for the well-being of very large groups. It has been estimated that, even in 1929, a fifth of all families were living at the poverty level, 35 per cent at what was considered a bare subsistence level, another fifth was not above a health and decency standard, and only a quarter had attained a comfort standard. These arbitrary standards, however, were doubtless higher than would have been set in 1860.

What the long-run effects upon wages of the depression that started in 1929 are likely to be still remains to be seen. Really comprehensive studies of the immediate effects are not yet available, though certain tendencies seem fairly clear. One of these was the very general effort, vigorously backed by the government, to maintain at least the current level of hourly wage rates. Considering the conditions faced, this effort met with very general success; in fact in a large number of occupations, as conditions improved after 1933, these rates were raised above the 1929 level. The result was that, when combined with a drop of about one-fifth in the cost of living, the real hourly earnings generally reached a level that was higher than ever before. Owing to shorter hours, real weekly earnings of those regularly employed probably declined slightly to 1933 but, by 1937, had more than made up this loss. Yet throughout these years the number of those unable to secure regular employment was so vast that the working class as a whole suffered a substantial decline in real wages.

The Hours of Labor. In 1860 the length of the typical working day was probably over 11 hours; that of the working week may well have been nearly 70 hours. Organized labor, still struggling to secure a 10-hour day, had met with very limited success in the effort; the ineffective attempts at legislative restrictions had accomplished little. After the Civil War, nonetheless, organized labor began to demand an 8-hour day and, in 1869, the government passed a rather ineffective law establishing this for its employees. Amendments in 1892 and 1912 greatly strengthened the law and extended it to cover workers employed on most government contracts. In the eighties the active campaign of organized labor secured the 8-hour day in a few crafts by 1890. At that date most unionized workers in factories had secured only 9 hours while the 10-hour day was typical in most occupations and prevailed in the majority of manufacturing,

mining, construction, and mercantile concerns along with a 58- to 60-hour week. It required the combined efforts of many groups for the next 30 years to reduce the typical working day to a point between eight and nine hours.

During the prolonged depression following the panic of 1893, which marked the first portion of this period, some ground was lost; but with business recovery, the rapid progress in unionization, and some aid by legislation, enough gains were secured so that by 1914 the typical working week was about five hours shorter than in 1890. Still more rapid advance was made during the remainder of the period following the outbreak of the first World War. The attitude of the Democratic administration was distinctly favorable to the demands of the workers, union membership quickly mounted, there was a serious shortage of labor, and the basic 8-hour day, applied to the railroads in 1916 and later to workers on the vast war contracts of the government, tended to become the standard in a wide range of occupations. In the field of manufacturing the reduction in the length of the working week between 1909 and 1919, mostly secured after 1914, was especially noteworthy. In 1909 only 8 per cent of the wage earners worked 48 hours or less per week; nearly 40 per cent worked 60 or more. In 1919 the figures were 48 and 12 per cent, respectively.

In the following decade ending with the outbreak of the depression in 1929 there was no very marked alteration in the general situation. Aided by the concerted drive of employers to recover some of the ground lost during the war, the weekly hours in some lines of manufacturing were raised to between 50 and 54, so that the proportion of those in this field working 48 hours or less declined to 45 per cent. On the other hand, this decade brought the appreciable decrease among those in manufacturing working 60 or more hours a week from 12 to 7 per cent. In 1923 the great steel industry, which had long insisted that only a 12-hour shift was practicable for it, went over to an 8-hour shift for most of its employees. But the shorter hours secured by trade unions or the slow process of obtaining legislation that would pass the scrutiny of the courts was by no means confined to the groups directly affected by these two modes of action. All workers tended to benefit thereby; for, as shorter hours made one occupation more attractive, employers in other fields were put under pressure to shorten the working day or face the prospect of losing their employees.

It was in part under such influences that groups like farm laborers and domestic servants, generally lacking both organization and favorable legislation, secured some share in a shorter working week, though their week still remained about the longest for any large groups. Meanwhile, organized labor, seeing the goal of an 8-hour day for which it had so long fought almost attained and in some crafts already exceeded, began to

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demand still shorter hours. In 1926 the Federation of Labor came out for a 5-day week, and then in 1932 for a 6-hour day and 30-hour week.

The announcement of this demand for a still shorter working day when compared with the demand for a 10-hour day, which was being made in the years just before the Civil War, well indicates the remarkable progress made during this period in reducing the hours of toil for the American worker. If we can assume that just before the abnormal situation created by the outbreak of the depression in 1929 set in, the typical length of the worker's week was about 50 hours and then remember that just before 1860 it had been about 70 hours so that during this period the worker has gained approximately 20 hours of leisure per week, not to mention the reduction in the length of his working life, we can better appreciate what this advance must have contributed to the well-being of the people. This increase in leisure time, taking place during the same period when there was a marked growth in the quantity of goods and services being consumed by the masses, must be reckoned as one of the main contributions of the evolving economic order to the American standard of living. Nonetheless, it must be noted that in the portion of this period after about 1900, during which the reduction in the hours of work was most rapid, the standard of living failed to rise at so fast a rate as had prevailed before.

That the reduction in hours of work, won by 1930, will prove enduring may reasonably be expected. To what extent the additional very substantial reductions, largely made as a result of the abnormal conditions arising out of the subsequent prolonged depression, will prove enduring cannot now be determined. The decreased volume of production throwing millions out of work led to a general effort to spread employment by cutting the hours and days of work. Under the codes of NRA the 40-hour week was widely established; by 1935 it was estimated 12 million employees were under a 5-day week. Even in 1937, after business began to revive and the codes had lapsed, it was estimated that a week of a little over 40 hours prevailed in a large group of occupations of all types. Finally, in the autumn of 1940, under the provisions of the Fair Labor Standards Act, which will be described later, the basic 40-hour week went into effect in a wide range of industries, though there was overtime work in some of the war industries.

That the experience of the depression has given an impetus to the demand for shorter hours than prevailed in 1930 is unquestionable. How far such reductions can go and how rapidly they can be carried out without reducing workers' earnings, and at the same time avoid an increase in production costs and thus a lowered standard of living, will vary with different industries and the rate of advance in technological and economic efficiency. That any very general adoption of a 30-hour week as a per-

manent standard could be made at the present time without involving such a loss appears highly improbable. It would, therefore, have to be justified by a belief that the resulting loss arising from the smaller quantity of goods and services which would be consumed was more than offset by the gain from the added leisure time. Moreover, what that gain might be would depend upon the wisdom with which the leisure time was used, a problem concerning which the American people still have much to learn.

The Strain of Work. In occupations where machinery was adopted one very common result was to decrease the purely muscular effort required to accomplish a given task. Though no measure of this gain is possible it must have been enormous. On the other hand, machine methods meant specialization and constant repetition of a given movement, however slight; the muscular effort and the steady attention involved tended to result in a nervous as well as a muscular strain. Added to this strain from monotonous repetition was the fact that power-driven machinery set the pace, which was commonly as fast as practicable. Such things have made the strain of work much greater than in the leisurely going days when simple hand tools were the main equipment. Nor was this greater strain confined to those directly working on machines; it spread through nearly every occupation, from the purely clerical job to that of the highest executive. Greater speed of action was commonly one element in the growing efficiency of the economic order. To make sure of this efficiency the hours of work often had to be shortened and retirement at an earlier age became more common. The workingman over forty-five found it more difficult to get a new job and compulsory retirement at around sixty-five, from the chief executives down, became increasingly frequent.

With power-driven machinery, too, came far greater danger of injury and loss of life. Other conditions surrounding work in mines, factories, and elsewhere created new dangers to health, though in emphasizing these we doubtless have minimized the industrial diseases of the earlier age. Despite the growing safeguarding measures, the annual toll of industrial accidents still remains a staggering one.

Unemployment. In addition to the increasing risk of physical injury that the worker faces under modern methods of production there has been an increase in the economic risk of loss of employment. Although unemployment is by no means a new risk there can be little doubt but that the proportion of the working class who now face this risk is much greater than formerly. One explanation for this is found in the decrease in the proportion of workers engaged in agriculture and the increase in the proportion engaged in manufacturing, mining, and other occupations where the fluctuations in employment are more marked. A second cause is the great increase in the frequency of strikes and lockouts and in the

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number of workers affected thereby. The total of days of work and wages lost through this cause in the course of a year has become an enormous figure. Finally, there are the various characteristics of modern capitalistic industry that seem to make stabilization of industry difficult, the cumulative effects of which are seen in the business cycle. The growing complexity of our industrial society makes an effective coordination in the functioning of the parts more uncertain and the greater interdependence results in a depression in one field reacting upon a larger number of workers in other fields.

Competition and Mobility of Labor. It has previously been pointed out that competition among workers seeking employment takes two main forms: the direct competition among those seeking the same job and the indirect competition among the products of different workers selling in a given market. In both forms competition became keener than ever before during this period. Direct competition among workers was increased by all the developments that tended to create greater mobility of labor. Lowered costs of transportation, better and cheaper means of communication, and all the things that helped to provide better organization of the labor market, such as newspaper want ads, the growth of private and public employment agencies, or labor exchanges, contributed toward this result.

Of course influences tending to check mobility still remained, such as family or social ties, inertia, ignorance, and poverty; but they were less effective than formerly and movement from one occupation to another or from one place to another was easier than ever before. The latter is illustrated by the great rapidity of the settlement of the West, by the drift from the rural districts to the cities, and by the recent migration of Negroes from the South to the North. Moreover, it was international in scope as was reflected in the growth of immigration from countries that had contributed little or nothing to our population before 1860. However, our recent immigration laws have raised a most effective barrier against this stream.

A similar group of factors tended to increase the indirect form of competition among the products of labor and included all those developments that helped to widen the market for commodities or services and to provide a more highly developed organization of that market. Here, too, the effects were international in scope, in fact more nearly world-wide than in the former case, though artificial interference in the form of tariffs and other barriers was also more common. As never before, the competition of the products of the cheap labor of the Far East as well as of Europe was felt in countries with a higher wage level.

Although it is true that a high wage *per hour* does not necessarily mean a high labor cost *per unit of product*, since the high wage may be more

than offset by greater efficiency either of labor or of the other factors determining total costs of production, still, other things being equal, high wage rates increase production costs and put the producers paying them at a disadvantage in a competitive market. Thus it became increasingly evident that, to protect a high wage level from the competition of workers receiving a low wage or working under less favorable conditions, it was desirable to raise the standard of the lower paid workers, not only within the country but in other lands as well. Herein is found the explanation for the first attempts to secure international agreements establishing a few standards as to working conditions which appear during this period and which will be described later. The main point here is to emphasize the fact that, like other groups, the working classes of this country were being increasingly affected by conditions in the world at large.

The effects of these two main forms of competition will vary with different groups of workers. The chief tendency is to bring about a greater degree of standardization of wages and working conditions; this obviously means that some may suffer while others gain, for competition may bring some down while raising others. Yet we may assume that the ultimate result is a net gain for both labor and society as a whole, since greater mobility of labor will tend to place laborers at work where they are most productive and greater mobility of the products of labor will tend toward their being produced where they can be obtained at the lowest cost.

Scientific Management and Personnel Administration. In the field of labor, just as in so many other branches of economic activity, we find efforts made to introduce more scientific methods. The development of scientific management made a beginning and suggested the need for, and the possibilities of, the study of labor administration. However, it is only in the last two decades, considerably stimulated by the wartime conditions, that widespread interest appeared in what is now commonly called personnel administration.

Early scientific management had chiefly dealt with such studies as how to save labor by standardizing processes or movements, by securing greater speed of work, and by the introduction of mechanical aids; it was concerned with more purely technological problems of production. The recent emphasis in personnel administration is concerned with the problems of the worker's fitness for the job, his psychology, and the conditions which, by making him an ambitious, contented, and willing worker, tend to increase his efficiency. The developments in the field of psychology, though still leaving much to be accomplished, have contributed largely to the study of these problems. By job analysis to determine what traits a given job required and then analyzing the workers so as to obtain the one who possessed these traits, there was a better chance of the worker's being adapted to his work. Such studies, combined with increased atten-

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tion to vocational guidance, helped to prevent putting a round peg in a square hole with all the losses resulting therefrom.

Personnel administration also stressed the importance of studying the psychological reactions of the worker as they affected the efficiency of his work. When we recall that the unwilling and forced character of work under slavery was long ago recognized as a serious evil, it seems strange that so little attention had ever been given to this question before. The very fact that the existing system is sometimes spoken of as "wage slavery"—whether correctly or not is beside the point—would lead one to expect inquiries as to its efficiency. Today employers are studying the question and experimenting with various plans designed to promote among their employees an attitude toward their work such as will increase their efficiency. Studies which have disclosed the heavy turnover of labor in many industries—that is, the frequent changes in the workers employed—have given added proof of unnecessary waste and increased labor costs.

Although a growing conviction of the financial benefit to be obtained from a study of the problems of labor administration may have been the chief incentive, humanitarian motives have not been absent. In some cases fear of public opinion, the latter also being shaped by humanitarian principles, has convinced employers that consideration of these problems was wise business policy. As yet only a small beginning has been made; but just in so far as the turnover of labor can be reduced, the adaptation of worker and task improved, and the conditions of employment made such as induce efficient work, there will be a gain to all concerned.

The Laborer and Capitalistic Industry. Doubtless the most important development affecting the condition of the laborer has been the spread of capitalistic industry. In most lines of economic activity there has been a marked increase in the size of the business unit. The number of laborers employed in each concern has grown so steadily that dependence on any one laborer has become very slight; in consequence the individual has found himself in a much weaker position in bargaining with an employer for the sale of his labor. Even under a handicraft organization of industry the wage earner was in a weak bargaining position, for he had to earn a living and seldom possessed any appreciable savings upon which he could fall back during unemployment. Moreover his labor was in the nature of a perishable product—a day's work lost was lost forever—so that acceptance of a low wage might be agreed to rather than face this loss. The growth of capitalistic industry simply added to these disadvantages and it did so in several ways.

Not only was the employer of a large number of workers less dependent on securing the services of any one but he lost all personal contact with his employees. The relatively close human relationship,

such as existed between the master craftsman and his journeymen or apprentices in former days, disappeared. In its place came an impersonal relationship that lacked the softening effects of the older system. The "soulless" corporation became the typical employer in many fields of economic activity. Furthermore, modern capitalistic industry, in most cases more keenly competitive than ever before, brought increased pressure to bear on the producer to lower his costs of operation, among them the labor cost. Finally, the prospect of a wage earner eventually advancing to a position as an independent employer and entrepreneur steadily declined in those industries where the size of business undertakings increased.

All these developments tended to create a growing gap between employers and employees, and, as the two groups became more sharply differentiated and the conflicting interests were accentuated, the struggle between labor and capital came to the front as one of the leading problems of industrial society. It was these developments that led the workers to try to unite in order to improve their bargaining position by offsetting the strength of organized labor against the growing power of capital. We now turn to the history of the labor movement that resulted.

CHAPTER XXXVI

THE LABOR MOVEMENT AND LABOR LEGISLATION SINCE 1860

The Labor Movement to 1879. We have previously seen that by the decade of the fifties labor was beginning to accept the changes incident to the introduction of the factory system and modern capitalistic industry as inevitable. Consequently, it had abandoned efforts designed to restore conditions under the earlier organization of industry or to secure a more ideal economic order, and was settling down to more practical plans for improving its position under the new situation. Manufacturing, which had developed rapidly during the fifties, received a further impetus during the Civil War, and the use of machinery and factory methods spread rapidly. Moreover, it was during the 35 years or so following 1850 that the tremendous expansion of the railroads and the decline in freight rates were widening markets more rapidly than at any other period in the country's history.

These developments interacted to hasten large-scale production and the spread of the factory system and to intensify competition, all of which had a marked reaction on the economic position of labor. Furthermore, this only confirmed the conviction that these new conditions were inevitable and that the sooner labor adopted practical measures for meeting the situation the better. To this task the labor movement now turned. But in the decade and a half following the end of the war the difficulties of the task were increased, (1) by the economic readjustments following the war and (2) by the long industrial depression that succeeded the panic of 1873.

In view of the economic changes occurring it was natural that the outstanding tendency in the labor movement of these years should be the effort to nationalize the movement and particularly to establish national trade-unions. As the markets for various products tended to become national in scope, it was obvious that unless the standards that labor sought to establish were also national in extent, competition would tend to undermine them. In the years from 1864 to the outbreak of the panic of 1873, some 26 national trade-unions were organized; by the latter date their membership had risen to around 300,000.

For the most part these unions were formed in the more skilled trades little affected directly by the influence of machinery and factory methods,

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the chief exceptions being the textile workers, the printers, the coopers, and the boot and shoe workers. The last two especially were facing the rapid introduction of machine methods at this time. The Knights of St. Crispin, the union of the boot and shoe workers formed in 1867, grew rapidly and attained a membership of 50,000 by 1870, making it the largest in the country. In addition to the trades just mentioned national unions were organized during these years among the curriers, ship carpenters, caulkers, cigar makers, coach makers, tailors, railway conductors, locomotive engineers, telegraphers, wool hat finishers, miners, and various branches of the woodworking, iron and steel, and building trades. The national organizations were still weak, however, serving mainly as a forum for agitation, discussion of problems, and formulation of broader policies; the main seat of power and action remained with the locals and the city trade assemblies.

The need for nationalization of the movement also led to renewed attempts to secure an organization representative of labor in general, out of which arose the National Labor Union formed in 1866. The fact that its organization was closely connected with the agitation for an eight-hour day was partly responsible for its centering activities on legislation rather than unionism; this led to the establishment of a labor lobby in Washington in 1869. A recognition of the international aspect of the labor movement resulted in sending a delegate to a European congress the same year. The stress on legislation finally culminated after 1870 in the disintegration of the union through absorption in political movements.

Among trade-union activities at this period the struggle to secure a shorter working day was particularly prominent. Up to the Civil War labor had sought a ten-hour day, but afterwards the common demand was for an eight-hour day. Eight-hour laws were passed in several states, though of little effect in practice; in 1868 Congress enacted an eight-hour law for government employees. In 1872 a great strike of the building trades in New York was successful in obtaining an eight-hour day, but in the general depression of the following years this movement received a temporary setback. Various cooperative schemes also received considerable attention, chiefly during the years 1866 to 1868 in industries where the depression resulted in the failure of a strike. The changes that opened up the skilled crafts to the competition of workers having little or no skill led to efforts to limit the number of apprentices and admission to the unions. Employers were also active in organizing to oppose the unions and, although most of their association had only a local basis and refused to recognize the unions, there were some instances of collective bargaining. The first national trade agreement was secured by the puddlers in 1866 and lasted for many years; three years later the anthra-

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cite miners obtained an agreement for a sliding scale of wages which continued until 1874. Other activities of the unions at this time included the accumulation of strike and benefit funds, the introduction of the union label, and agitation for land and currency legislation.

The long-drawn-out depression that followed the panic of 1873 gave a serious setback to the labor movement. Numerous strikes occurred and on a larger scale than ever before, but under the depressed conditions practically all resulted in failures and often in the disruption of the union. Important strikes broke out among the cigar workers, the textile operatives, and the miners. In the Pennsylvania mining region an organization known as the Molly Maguires terrorized the section by its violent crimes until it was crushed in 1876 following a trial which resulted in the execution of ten members. In 1877 the first great railroad strike took place, starting in Pittsburgh and spreading to New York, Buffalo, Chicago, St. Louis, and the Southwest. It was marked by considerable violence and much destruction of property, and led to the first use of Federal troops to maintain order during a strike in time of peace. Though the strike failed, it for the first time aroused the whole nation to the seriousness of the labor movement.

On the Pacific coast riots broke out against the Chinese coolie laborers and, when some of these were brought east to break strikes, thus illustrating the growing mobility of labor, the Pacific coast was able to arouse support for its demand that coolie immigration be stopped. This was done by treaty in 1882. Under such difficult conditions many of the national trade-unions went to pieces or remained dormant; the largest, that of the boot and shoe workers, nearly vanished. Such strength as remained in the labor movement was confined to local unions and the city trade assemblies. By 1878 the total membership of all unions had fallen to around 50,000.

The apparent inability of the unions to accomplish much during the depression resulted in their giving more attention to other lines of action, particularly political activity. The rapid fall in the general price level, which took place after 1864 and proved very trying for many classes, was generally charged to the appreciation of the greenbacks and the effort to restore them to a parity with gold. The opposition to this took the form of the greenback movement into which an increasing proportion of the labor leaders was drawn. As this movement gained strength, especially after the farmers joined in large numbers and a political party was organized, the more purely trade-union objectives were lost sight of and the strength of the labor movement dissipated. Cooperative schemes again were taken up as a means of economic reform, chiefly among the farmers; many labor leaders joined in the movement. The more radical groups turned to socialism or anarchism. These years are marked by the first

appearance in this country of an active interest in modern socialism. Several organizations representing varying points of view among radical leaders were formed at this time, the Socialist Labor Party, started in 1877, being the most important. This movement also attracted many labor leaders, in part owing to the prominence of the foreign-born element in the trade-unions, notably in cities such as New York and Chicago, and, by adding to the dissensions as to objectives and policies, further weakened the trade-unions.

The Labor Movement from 1880 to 1896. Beginning in 1878 business conditions began to improve and by 1880 a fair degree of prosperity had returned. Resumption of specie payment in 1879 had restored the greenbacks to a gold parity and that disturbing issue had been eliminated; however, as the general price level continued to fall until 1897, the free-silver movement was rising in its place. Under these more favorable conditions the labor movement, though still showing marks of the dissensions of the preceding decade, gathered new strength and launched forth on a program of pure trade unionism of a militant yet opportunist type. From then until the next long depression after 1893, except for some reaction in the middle eighties, the movement made decided progress.

The first task was to build up the membership of the unions and then to unite the forces of labor through some central organization. A widespread effort to secure an eight-hour day was inaugurated and in the agitation that followed a much more definite wage consciousness developed than had appeared theretofore. The conservative railroad brotherhoods, emphasizing their benefit systems, remained less militant than the other craft unions; the latter adopted more aggressive methods, particularly the cigar makers under the leadership of Samuel Gompers. A new effort to federate the forces of labor was made in 1881 by the formation of the Federation of Organized Trades and Labor Unions. It was concerned chiefly with legislation and mainly supported by the craft unions, but failed to accomplish much. In 1886 in order to secure more results and to meet the competition of the rapidly growing Knights of Labor, an organization rather antagonistic to craft unionism, it was reorganized as the American Federation of Labor, which subsequently became the leading force in the labor movement of the country.

During the early eighties, however, the Knights of Labor forged rapidly to the front as the leading labor organization. Started in 1869 as a secret organization it made very little progress at first and the element of secrecy was soon abolished. The underlying unit of organization was the local assembly, above it came the district assembly, and at the top the general assembly. In marked contrast to the trade-union it was not organized on a craft basis; although the members of the locals might belong to a single craft, they increasingly tended to come from a great

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variety of trades and included many semiskilled or unskilled workers and often farmers. The resulting diversity of interests and lack of unity proved a serious element of weakness. Moreover, most of the power was lodged in a general assembly whose action often caused discontent among the locals. Although the program of the Knights was a rather comprehensive one, designed to appeal to its varied membership, and included many broad reforms necessitating legislation, the organization took an aggressive part in the labor movement of the early eighties and its membership rose from 28,000 in 1880 to 60,000 in 1884. At that date the Federation, the rival leader of the craft unions, had a membership of 105,000.

The three years beginning in 1884 were marked by the most active agitation, many strikes, and considerable violence in the labor movement. In 1884 a financial panic and some depression in industry led to wage cuts and numerous strikes with many failures. A series of big railroad strikes, which occurred in the Southwest, at first met with some success and encouraged agitation. Great efforts were made to extend the organization of labor, particularly by the Knights of Labor, which was active in bringing in semiskilled and unskilled workers; its aggressive efforts to win over the craft unions aroused the hostility of the Federation. The Knights enjoyed a phenomenal growth; their membership rose from 104,000 in 1885 to 700,000 in 1886, so that it quite overshadowed the Federation which attained a membership of 138,000 in that year. The total union membership for the whole country was about 1,000,000, a figure not reached again until 1901. There was also great activity in the organization of new national trade-unions at this time, nineteen being started in the two years 1886-1887.

The numerous strikes of these years were marked by extensive use of the sympathetic strike, active and spontaneous participation on the part of the less skilled workers, a decided class consciousness evidenced by growing hostility toward capitalism, and considerable violence. The violence culminated in 1886 in Chicago where a group of strikers attacked some strike breakers. When the police intervened and were attacked with stones, they fired, killing four and wounding many. The following day, at the close of a meeting in Haymarket Square called by the workers to protest against the shooting, a bomb was hurled among the police who at once opened fire. The bomb outrage was attributed to a group of anarchistic labor leaders, four of whom were subsequently hanged; however, the adequacy of the evidence used in securing conviction has always been vigorously disputed. This culmination of the series of labor disturbances aroused much public hostility, was a factor in the failure of many strikes, and gave a decided setback to the labor movement.

After 1887 the Knights of Labor rapidly declined owing to the failure of many strikes and the elements of weakness in its organization. The un-

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skilled workers dropped out, the craft unions shifted to the Federation, and the membership dropped to 100,000 in 1890. Thereafter the farmer element dominated and the Knights ceased to be a factor in the labor world. In the meantime the old federation of the craft unions was merged in the new American Federation of Labor organized in 1886 with Samuel Gompers of the cigar makers' union at its head. Its organization was on a craft basis with the national trade-unions as the chief constituent elements, and, until very recently, it has always included by far the greater portion of these unions; the conservative railroad brotherhoods and the extreme radicals were the chief groups that chose to remain outside.

In the quieter years that followed 1886 the federation steadily built up its membership until it reached 260,000 in 1893. During this period it devoted less attention to labor legislation and politics and was concerned chiefly with pure trade-union activities. The struggle for the eight-hour day was renewed and met with the greatest success among the carpenters in many of the large cities. The growth of employers' associations provided a basis for collective bargaining and the era of trade agreements may be said to have really begun with that of the iron molders in 1891. The public concern aroused by the agitation of the middle eighties resulted in developing greater opposition to labor unions and their practices. This was particularly noticeable in the growing use of court injunctions issued against the unions and in the resort to the conspiracy or the new antitrust laws to curb their activities. On the other hand, labor succeeded in securing much favorable legislation, such as laws against black-listing and discrimination against union men and laws promoting arbitration.

After the panic of 1893 the labor movement faced another long-drawn-out period of depression lasting until 1897. In marked contrast to similar preceding periods, most of the trade-unions passed through these years without heavy losses of members or serious disorganization, thus indicating the far stronger basis upon which the movement had become organized. The federation was able to maintain a membership around 270,000 which fluctuated very little in spite of the depression. There was one union that suffered a disastrous blow even before the depression set in. The iron and steel workers had developed the strongest union in the country, but in 1892 it became involved in a struggle at the Homestead works of the Carnegie Steel Company which was attended by marked violence. The

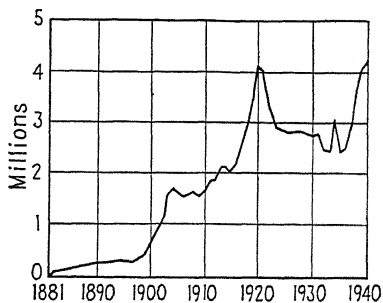


FIG. 56.—Membership in the American Federation of Labor since 1881.

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defeat of the union shattered its strength and, in this industry, over four decades passed before much power was recovered.

As depression set in and wages began to be cut, numerous strikes occurred involving over 750,000 workers, but unlike those of the middle eighties they were generally defensive in character. The most prominent was one that started at the Pullman car works in Chicago in 1894 and soon spread to the railroads centering at that place. Eugene Debs, who had just organized the American Railway Union, distinct from and rather opposed to the older railroad brotherhoods, became the leader. When a large amount of property had been destroyed and Chicago was nearly cut off from communication with the outside, President Cleveland ordered out Federal troops, Debs and others were arrested, and the strike eventually collapsed. Another big strike started by the United Mine Workers also failed and most of the other strikes met a similar fate. As usual these failures led many workers to turn to political action in the hope of securing reforms through legislation; even the Federation of Labor showed greater interest in such measures, but it generally took the stand of refusing to engage directly in politics. However, many workers, especially those among the left wing groups, became active in the Populist or other radical party movements reflecting the general social unrest of these years.

The Labor Movement from 1897 to 1917. In the unusually prolonged period of prosperity, which followed the middle nineties and which was marked by only minor industrial depressions, the labor movement made such progress that this has been considered the flowering of the modern period in American trade-unionism. The membership of the American Federation of Labor rose from 272,000 in 1897 to nearly 1,700,000 in 1904; after remaining about stationary a little below this figure for six years, it jumped to 2,500,000 in 1917. At the latter date the total membership of all American trade-unions was approximately 3,100,000. The chief gains were made in the building trades, the steam railroads, and the mining and printing industries; in fact nearly half of the total union membership was in the transportation and building groups, and the remainder was widely scattered. The greatest concentration occurred in the coal, glass, and stone industries. Though unions outside of the Federation had about 40 per cent of the total union membership in 1897, their proportion had fallen to about 24 per cent in 1901 and 20 per cent by 1917, so the period was marked by the growing predominance of the federation in the labor movement. Outside of the federation were the old railroad brotherhoods representing the most conservative type of unionism.

The more radical elements developed several independent organizations. Most prominent among them was the Industrial Workers of the World, or I.W.W., organized in 1905. Disregarding craft lines, it

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sought to include all workers in an industry and favored direct action. Originally most active in the West, it included the Western Federation of Miners organized in 1893 on an industrial basis. Its strength was seriously impaired when the miners, who subsequently joined the Federation of Labor, seceded in 1907. It was also active in the Western lumber industry and later in the textile industry of the East. Its membership was subject to marked fluctuations and probably never rose above the 30,000 reached in 1912; but the radical policies adopted and the violence attending many of the strikes in which it participated created a vigor of opposition which, combined with the lack of permanent strength in its organization, resulted in many failures, so that after 1914 it practically vanished.

During these years the Federation of Labor and the unions affiliated with it were actively pushing their program by the usual trade-union methods. The steadily rising cost of living led to numerous strikes for higher wages which, in general, were fairly successful. The fight for shorter hours was resumed, also with considerable success. By 1900 the eight-hour day generally prevailed in the building trades, coal mining, and granite cutting, and in 1907 was secured by the printers. Collective bargaining and trade agreements became more and more common as both workers and employers developed stronger organizations. Between 1898 and 1902 several important employers' associations entered into agreements with unions; after the latter date, marked by the success of the great anthracite coal strike, the rising power of the unions caused sufficient alarm among the employers so that many of their associations assumed a much more belligerent attitude than had prevailed theretofore and several organizations were formed primarily to oppose union demands and the enactment of labor laws.

The greater strength to be obtained by organizing all the workers in an industry instead of limiting the organization to one or more separate crafts, often scattered among several industries and frequently involving jurisdictional disputes, resulted in some shift toward industrial unionism. Although this tendency was most marked in the more radical unions outside of the federation and differed from the latter's traditional basis of organization, the federation showed greater willingness to recognize its advantages in certain industries. The first prominent example of this type within the federation was the brewers' union; much the most important subsequently was the United Mine Workers, a union which under the leadership of John Mitchell became very powerful after about 1900 when a prolonged strike had led the government to intervene. In some industries greater unity of action among the various crafts was secured through subordinate organizations such as the local building trades' councils or amalgamated craft unions. The federation's policies, however, have al-

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ways been dominated by those who favored craft unions and commonly at least three-quarters of its members belonged to them.

Although most of the leaders in the federation emphasized organization of labor and union activities as the chief means for securing their ends, the growing strength of the opposition and the measures it resorted to forced the leaders to devote more attention to political action and the securing of favorable legislation. This tendency became quite marked after about 1906. The policy of the federation leaders was opposed to organizing a separate political party but favored trying to throw the labor vote to the candidate or party most inclined to support its demands. The more radical among the workers, both within and without the federation, refused to be satisfied with this policy and supported the various labor or socialistic parties that sprang into existence during these years. They failed to accomplish anything appreciable, though in the presidential election of 1912 the socialist candidate polled 1 million votes.

As the membership of the unions steadily grew, politicians gave more serious consideration to the demands of labor and increasing success was attained in securing the legislation desired. Since the Democratic party seemed more inclined to favor the labor program than the Republicans, labor had more commonly endorsed its candidates. When that party finally came into control of the Federal government under President Wilson in 1913, labor succeeded in obtaining from Congress more favorable legislation than ever before. The Department of Labor was created and its head was given a seat in the Cabinet. The Clayton Act of 1914 contained provisions designed to limit the use of injunctions and the application of antitrust laws in labor cases, though subsequently they proved largely abortive. Better protection for seamen was provided; and in 1916, with a general strike on the railroads in prospect, the Adamson Law established the basic eight-hour day on the railroads.

The Labor Movement from 1917 to 1933. When the United States entered the first World War, business was intensely active and the demand for labor great while immigration was severely reduced and emigration heavy. The increased demand for war supplies combined with the heavy draft of men into the army greatly increased the scarcity of labor, and the urgency of the situation made the conservation of the available labor supply and its effective mobilization of the utmost importance. The various measures adopted to meet the situation will be described subsequently; here it will suffice to note that these conditions put labor in an exceptionally strategic position. Lacking resort to conscription of workers, it was necessary to try to prevent loss of labor power through strikes and otherwise by making the conditions of work fairly acceptable to the workers. By a tacit understanding the unions were left free to organize the workers. The result was an unprecedented growth

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in membership; the federation attained a membership of 4,150,000 by 1920 and the total for all unions rose to 5,110,000.¹

The growth during these years was notable for the marked extension of unionism among the semiskilled or unskilled workers in several industries where the unions had theretofore had little or no strength, such as the textile, packing, metal, and clothing industries and among the seamen, longshoremen, and several groups of railway employees. Unusual progress was made in bringing women into the unions, especially among the clothing, textile, and packing-house workers, the railway clerks, and the telephone operators, so that by 1920 there were nearly 400,000 female members of the unions—more than five times the number in 1910. Over two-fifths of this total was made up of garment workers, and the clothing industry had a higher percentage of its female workers organized than any other industry, followed by the leather industry and printing and publishing. It is obvious, however, that the conditions surrounding the work of women are such that the development of strong unions among them is very difficult and as yet only a small beginning has been made.

During the war years the rapid rise in the cost of living tended to make an increase in wages the chief concern of the workers. Though strikes did occur in spite of all efforts, the cooperation of most of the union leaders with the governmental and other agencies established for the purpose tended to reduce their number and duration; collective bargaining and adjustment through conciliation or arbitration attained an unprecedented development. Though outside the occupations where the shortage of labor was most acute wage rates seldom kept pace with the rising cost of living, constant employment and a heavy premium for overtime enabled many workers to fare better than ever before. Progress was made in securing a shorter basic working day which, where overtime was frequent, brought high pay. Standardization of working conditions was advanced, the closed shop was extended, and the unions became more firmly entrenched than ever before.

The test of the strength of this abnormal wartime growth of unionism came when the inevitable reaction set in about the last of 1920. Seizing the opportunity thus provided to win back some of the ground lost to organized labor during the preceding years, an extensive campaign was started among employers against the unions, particular emphasis being laid on the recovery of the open shop. Defensive strikes broke out in many places, but seldom succeeded and, among the newer, less well-organized trades, often shattered the unions. By 1923 the total trade-union membership had been reduced to less than 3,700,000 of whom about

¹ A deduction of about 230,000 should be made from this total for members of international unions living in Canada.

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3,000,000 belonged to the Federation of Labor; nearly all were included in the 108 national or international unions affiliated with the federation. The heaviest losses occurred in the metal and transportation unions; in the textile and packing industries substantially all the recent gains were lost. Among the newer unions, those in the clothing industry were most successful in holding much of their gains, and the older skilled craft unions suffered little if any losses. Although wage rates were cut and in some industries the working day was increased, the reduction in the workers' earnings was seldom so great as the fall in the cost of living—a result partly due to the greater strength of the unions in the skilled trades and to the effects of severe immigration restriction among the unskilled. Thus the net result of the war and its aftermath was to leave the unions larger and more powerful than before.

About this time there appeared a more general move among employers to organize their own workers into so-called company unions or else to form some sort of employee representation through which these workers could present their grievances and wants more effectively to their employers. This was frequently accompanied by various welfare measures designed to improve the condition and increase the contentment of the employees. Sometimes simply due to an effort to secure a better administration of labor, at other times induced more by the wish to displace existing unions or to forestall independent unionization, this movement was generally regarded with hostility by the regular unions; yet, in the absence of anything else, it reflected an immediate gain for the workers.

It is significant that, in the years marked by such relative prosperity as prevailed from 1923 until the close of 1929, trade-union membership underwent a slow but very steady decline; the total in 1930 was nearly 3,400,000¹ of whom 81 per cent, the same proportion as in 1923, were affiliated with the federation. The chief gains during these years were among the building and public-service workers, but they were more than offset by the losses among the soft coal, clothing, and metal workers. That the onset of the depression should cause another drop to a total of under 3,000,000 in 1933 was a normal result of the widespread unemployment that followed. The earlier decline, though in part attributable to the growth of technological unemployment, seems to reflect a less aggressive attitude on the part of most unions and the vigorously continued antiunion activity on the part of employers, augmented by conservative Federal administrations and numerous unfavorable judicial decrees and decisions.

Within the union movement there were signs of growing dissatisfaction and dissension. The younger and more radical groups felt that the federation leadership had become too capitalistically minded and lacked

¹ This included about 200,000 Canadian members.

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aggressiveness and an adequate interest in organizing the unskilled and semiskilled workers, especially those in the mass production industries. They insisted that the industrial union type of organization was essential to success in such industries and felt that the jealousies of the dominant craft unions blocked such action.

Meanwhile, the federation took measures to stop the practice of boring from within, adopted by the more radical elements, by endeavoring to expel the communists, who then frequently resorted to setting up rival unions of their own, but constantly fell out among themselves and so were able to accomplish little. Although the socialists were generally allowed to remain, they proved a disturbing element for the conservative leaders. Still another factor of discord was due to the appearance in the large cities in greater numbers than ever before of the labor racketeers who muscled in to control the unions and ran them with the primary purpose of lining their own pockets. It was felt that the federation was not sufficiently energetic in trying to eliminate this element whose activities had aroused considerable public hostility. The main product of all this dissension was a violent split in the ranks of organized labor which occurred in the following period.

The Labor Movement since 1933. The advent to power of the Democratic party under Franklin D. Roosevelt in 1933, at the crisis of what is commonly called the worst depression in our history, appears destined to mark the beginning of a veritable New Deal for labor. Probably never before had the need of labor for assistance been so great; certainly never before had the government responded to labor's needs in such a wholehearted manner. This response was made possible largely by an unusually favorable political situation. The Democratic party, traditionally the more friendly toward labor despite its conservative Southern element, had stressed the New Deal, designed to improve the condition of the masses, in the campaign. The victory in the presidential election had been an overwhelming one; the Republicans carried only six states and the Democrats emerged with large majorities in both houses of Congress and control of an unusual number of state governments. The widespread unemployment and economic distress with the increasingly insistent demands for relief, leading even to fears of a social revolution, produced a state of mind such that it was possible within a relatively brief time to adopt measures of reform many of which might otherwise have been long delayed. Most of the resulting legislation will be described subsequently, but the effects upon the labor movement were electric.

Within a year practically the whole loss in total trade-union membership since 1923 had been recovered; by 1936 the total was rapidly approaching the all-time peak of 1920; by the close of 1937 when it reached 7,300,000 it was nearly 50 per cent above that peak. Significant gains at

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this time were made in mass production industries such as the steel, rubber, and automobile, where unions had previously possessed little strength. A much larger numerical growth occurred among the older unions where the soft-coal workers staged a remarkable revival, to say nothing of the growth of the teamsters, the clothing workers, and many other unions. The lead in this organizing movement was taken by the advocates of industrial unions.

When, in 1935, the federation, under craft union domination, refused to give the movement adequate support and approval, a group of eight affiliated unions of the industrial type, under the leadership of John L. Lewis of the United Mine Workers, formed temporarily their own Committee for Industrial Organization, commonly known as the CIO, and proceeded to carry on an intensely aggressive campaign with their own resources which generally met with marked success. The federation, finally stung to action, suspended its CIO affiliates in 1936 and started to combat their unions with rivals of its own, since the efforts to arrange a peace between the two groups had completely failed. The breach was widened when, late in 1938, the CIO adopted a permanent organization under the title of the Congress of Industrial Organizations. Augmented by further shifts of unions formerly affiliated with the Federation, the CIO was able to claim a membership of nearly 3,500,000 toward the close of 1937, a figure about 200,000 larger than that of the federation, not counting the suspended membership.

Subsequently, however, owing to withdrawals and attacks on allegedly communistic influences in some of its unions, the CIO lost ground while the Federation gained; so that by the middle of 1940 the latter had 4,250,000 dues-paying members as compared with unofficial estimates of around one-third this number paying dues in the CIO. The latter claimed around 4,000,000 members, and was generally a more active and aggressive group. Thus the cleavage between the more conservative craft unions and the more aggressive and radical industrial unions split the organized labor movement wide apart; yet in 1937 each of these two groups claimed a membership greater than the total for all unions in 1933.

The legislation most directly responsible for this growth in trade-union membership started with the National Industrial Recovery Act of June, 1933. Under this law the President was given authority to create an agency to establish codes of fair competition to control various practices in industry. Every code was to contain labor provisions giving employees the right to organize and bargain collectively through representatives of their own, chosen without any interference by the employer; granting them the right freely to join or refuse to join any union; and requiring the employer's compliance with the maximum hours of labor, minimum rates of pay, and conditions of employment approved or pre-

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scribed by the President. These provisions were obviously designed to stimulate the growth of independent unions and collective action among employees. That they did so is evident from the increase of 900,000 in union membership during the two years that elapsed before the Supreme Court declared the law unconstitutional in May, 1935.

To replace the provisions of the law designed to secure the workers complete freedom of association and protection in collective bargaining, Congress immediately passed the Wagner National Labor Relations Act. This law sought to ban as unfair all practices interfering with the free organization and conduct of unions by employees, to prohibit support of company unions by employers, and to ensure equitable conditions for the unions in collective bargaining with the employers. To administer its provisions the National Labor Relations Board was created with extensive powers to hear complaints, settle disputes as to the bargaining units and other matters, and issue cease and desist orders. Through the energetic administration of this law, the constitutionality of which was upheld in 1937, some of the most serious obstacles to the union movement, chiefly those originating on the employer rather than on the employee side, were removed or seriously weakened, and the opportunity for organized labor to bargain on more equitable terms was greatly improved. Yet, despite the stimulus to organization thus received, the vast majority of workers still remained outside the union fold.

The Extent of the Unionization of Workers. The attention given to organized labor often leads people to overlook the fact that it has never embraced more than a relatively small proportion of the country's workers. Typically its real strength has been confined to a few crafts or industries, and often there to limited areas. As compared with the more industrialized countries of Europe the unions of the United States have been relatively small in total membership and narrow in the scope of occupations covered.

Numerous factors help to explain this situation among which may be listed: the very recent industrialization of the country; the extensive use of machine methods that tend to decrease the proportion of the more easily organizable skilled craftsmen required; the size of the country with its enormous free-trade market and the possibility of shifting industry from one region to another; the great influx of immigrant laborers till after the first World War with the obstacles attending their organization; the difficulties in securing favorable legislation arising from the character of the framework of government and the power exercised by the employer class; and finally, the relatively high standard of living and the marked spirit of self-sufficient independence among the workers.

Satisfactory figures on the proportion of workers in unions can be found only for census years when occupational statistics are available.

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Wolman estimates that, in 1910, 8.6 per cent of the employee class belonged to a union; that at the peak in 1920, following the war growth, the figure was 17.5 per cent; and that by 1930 it had fallen back to 9.3 per cent. The rapid increase in union membership since then has probably raised the figure to over 20 per cent. The exclusion of agricultural employees from the reckoning would make little difference; for 1930 the proportion would be raised to only 10.2 per cent.

This weak showing as far as the mass of employees goes is in some measure offset by a concentration of strength in certain industries and crafts. During the first third of this century over half the total union membership was to be found in transportation, building construction, and mining; these groups with the smaller membership in the printing and clothing trades are said to have constituted the foundation of the American labor movement. In the broad field of manufacturing, which included more employees than any other general field, only about one-eighth of them had been organized in 1930, though the subsequent growth has considerably raised this proportion.

Such real strength as the unions possessed down to the recent expansion was to be found rather in small segments of industry or in particular crafts; ordinarily in both cases where skilled work was required. Thus among the railroads it was the independent, conservative brotherhoods embracing a high percentage of those connected with train service that possessed real power; in mining the anthracite coal miners have long been supreme while, until after 1933, the somewhat fluctuating power of the union in the bituminous fields seldom extended to the South; the strength of the building trades, though widespread, has been most marked in some of the large cities where at times they completely dominated the situation. This greater city strength holds true of unions very generally. Among the public-service employees, only the postal clerks and mail carriers are powerful; among the professional unions the musicians and the much smaller group of actors; in transportation, outside of the steam railroads, the longshoremens and the street-railway unions are the strongest.

It is thus obvious that the direct benefits to be obtained through the organization of labor have been largely confined, at least until the present decade, to a very small group of workers chiefly in the skilled crafts. That this group, constituting the aristocracy of labor, did benefit very materially is seen in the relatively greater gains that it made, as compared with common labor, in securing shorter hours, higher hourly wage rates, and better working conditions during the seven decades that ended in 1933. It has frequently been charged that the outlook and activities of this group have been narrow and selfish and disregarded the far greater need of the masses among the workers; that, despite the many obstacles to organizing the unskilled or the semiskilled workers, more

could have been done; and that, in dealing with problems where legislation was essential to secure results, the unions have too frequently failed to lend full support unless it was to their own immediate interest to do so.

Doubtless, as recent developments seem to indicate, there is some justification for such charges. It must be remembered, however, that the obstacles have been great and that even the craft unions have had to face a long and difficult uphill struggle. Nor have their achievements been entirely without benefit to the masses among the workers. The higher standards that they attained for themselves doubtless worked indirectly somewhat to raise those of the masses, and some of the legislation they actively supported has been of general benefit. Yet it must be admitted that widespread and effective action, both union and governmental, to aid the great body of workers had to await the advent of the New Deal era.

The Growth of Labor Legislation. For about a decade after the Civil War little was accomplished in securing legislation desired by labor; but during the final quarter of the century an appreciable, though modest, advance was made. It is only since the beginning of the present century, however, that labor legislation, both state and Federal, has experienced a fairly rapid growth. Wilson's administration and the wartime developments brought a distinct gain, but the reactionary forces slowed down the pace in the following period till the effects of the depression and the advent of the Roosevelt administration initiated a really spectacular advance.

In securing this legislation two groups have been mainly active. The forces of labor, chiefly through their organizations and growing power, have induced legislators to give their demands greater consideration and have backed the demands by the weight of numbers; yet certain types of governmental interference have been opposed by the more conservative labor leaders. The second group consists of the slowly growing number of people affected by the spread of a broader humanitarian spirit and led by a relatively small number of individuals actively interested in social reform, who have done much to guide and direct the efforts to secure legislation.

On the other side, hindering or actively opposing legislation, have been various conditions and groups. Mere inertia, partly owing to ignorance of, or indifference toward, undesirable conditions, has played its part, supplemented by the still strong spirit of individualism and the belief in a policy of *laissez faire*. This spirit, deeply embodied in our political institutions and the framework of our government, has created serious legal obstacles; as a result many laws that were enacted have been declared unconstitutional or so limited by court decisions as to be of little effect. The division of powers between the Federal government and the

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states has proved even more of an obstacle in this field of legislation than in most, and the very number of the states has added greatly to the difficulties of the task.

The most active opposition has come from employers, chiefly through their organizations, and from the more conservative elements who felt that the legislation was unnecessary, unwise, or prejudicial to their interests. As among the different states the competition of economic interests has been a deterring factor, each state fearing that a higher standard of labor legislation might involve an increased cost of production and drive business to other states. Recently, as the exporting of manufactures to foreign markets has increased, the fear of raising labor costs relative to those of other countries has gained force.

These obstacles help to explain why organized labor in the United States, including both conservative and radical groups, has been inclined to put less effort into securing favorable legislation than has been the case in most other countries. Another reason is that the real, class-conscious labor vote has never been so strong relatively as in some other countries. In consequence, labor has generally preferred to deal directly with the employer and commonly labor laws have been actively pushed only where the power of the union was inadequate for the purpose or the nature of the problem such that legislation was necessary to secure effective results.

The net results of these opposing forces as they became embodied in legislation cannot be described in detail. That, including all the variations between the states, would fill a large volume; consequently only the more important general trends in development will be noted.

As regards hours of labor most progress has been made by state legislation limiting the working hours for children and women. The first eight-hour law for children was passed in Illinois in 1903. By 1920 over half the states, and by 1938 nearly every state, limited the hours of labor of children under sixteen in most occupations to eight a day, and some of these set a higher age limit. The South Atlantic states, formerly most backward in this respect, have recently much improved their laws, though they still fall below the desired standards. Compulsory school attendance laws, commonly through sixteen years of age, now found in all states, though uncertainly enforced, have also tended to restrict child labor. At the same time nightwork for children has been very extensively prohibited. Marked progress has been made in advancing the age at which children are permitted to be employed in most lines of industry; fourteen years is the common minimum with higher limits in some states and industries.

However, the Federal laws of 1916 and 1919, designed to check the employment in factories and mines of any children under fourteen and

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of children under sixteen at night or over eight hours a day, were declared unconstitutional. The effort to secure an amendment to the Constitution to permit the prohibition of child labor under eighteen, though submitted to the states by Congress in 1924, had been approved by only 28 states up to 1940. Meanwhile, encouraged to try again by what seemed a more favorable attitude of the Supreme Court, Congress included in the Fair Labor Standards Act of 1938 provisions prohibiting the employment of children under sixteen in interstate commerce or in making goods entering into such commerce and also those under eighteen in occupations that were hazardous or detrimental to their welfare. Certain exceptions were permitted for those from fourteen to sixteen where their welfare was not likely to be injured.

From the first really effective limitation of the hours of women's employment by Massachusetts in 1879, the standard then set being 10 hours a day and 60 a week, down to the upholding, by the Supreme Court in 1908, of the Oregon 10-hour law for women employed in factories and laundries, only fair progress was made; but today nearly every state has some such limits in most occupations and in many an 8- or 9-hour day has been established. Weekly limits of hours, commonly from 48 to 54, are also set in most states in various occupations and nearly half the states prohibit certain kinds of nightwork by women.

In the case of adult males, limitation of hours was rather narrowly circumscribed and confined chiefly to public employees, those working on public contract and a few hazardous occupations such as transportation and mining. The law of 1868 establishing the 8-hour day for laborers, workmen, and mechanics employed by, or on behalf of, the Federal government was broadened in scope and made really effective by subsequent legislation, chiefly in 1892 and 1912. More inclusive in scope was the Walsh-Healey Public Contracts Act of 1936 which required that in practically all government contracts of \$10,000 or more the contractor should observe the basic 8-hour day and 40-hour week, refrain from employing boys under sixteen or girls under eighteen, comply with state health and safety regulations, and pay as a minimum the prevailing wage. The collapse of the NRA was followed in 1938 by the important Fair Labor Standards Act applicable to labor on goods entering into interstate commerce, the provisions of which will be described shortly.

More than half the states have fixed an 8-hour day for most employees on public works or contract work connected therewith, and many cities have taken similar action. Among private employments, in the field of transportation, besides the action of the Federal government, more than half of the states have shortened the hours of employees on steam and electric railways. In mining nearly every state of importance in this activity has established an 8-hour day. Outside of these pursuits a small

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number of states have set daily or weekly limits for all male factory workers.

Minimum-wage legislation in this country started in Massachusetts in 1912 and was promptly adopted by eight other states the following year; owing to constitutional difficulties it was confined to women and children or public employees down to 1933 and experienced a very hazardous existence down to 1937. After 1917, when an evenly divided Supreme Court left an Oregon statute standing, additional laws were passed until 1923, when the Court held a statute applying to the District of Columbia unconstitutional and subsequently took a similar view of the statutes in several other jurisdictions. In 1933, despite this discouraging experience, several states, following the advice of the President, enacted a revised type of law and, under the codes of the NRA, a comprehensive program of minimum wages, commonly between 30 and 40 cents an hour, was put into operation and made applicable to men as well as to women and children. But this legislation met the old fate; the NRA went down before the Court in 1935 and the revised New York act the next year. The outlook for such legislation seemed dark indeed until 1937 when the Court upheld a Washington statute very similar to the law that had been condemned in 1923. Sanction having finally been secured, half the states had minimum-wage laws on their statute books the next year. Only one was applicable to men and practically all, by vesting the determination of the minima in commissions, provided for the needed elasticity in application.

Encouraged by what was thought to portend a more favorable attitude on the part of the Supreme Court, the Fair Labor Standards Act was passed in 1938. It applied to workers in interstate commerce or those producing goods entering into such commerce and established minimum standards for wages and hours and the use of child labor. For the first year of its operation 25 cents an hour was to be the minimum wage, with time and one-half for overtime above the basic maximum 44-hour week. This was to be reduced to 42 hours the next year and to 40 starting in October, 1940. The minimum wage was to be raised to 30 cents for the next six years, and then to 40 cents or such rate, not below 30 cents, as the administrator might determine. Exceptions were provided for certain less efficient groups.

Another group of laws has been concerned with certain of the conditions under which wages are paid. Various statutes have provided for weekly or biweekly payment of wages and required a place and time for payment that was convenient for the worker. The conditions under which fines or other deductions are made have sometimes been regulated and the worker has been given a more secure lien to protect wages due him. Other laws have sought to curtail abuses incident to payment in truck and

the use of company stores. In a few instances public assistance is provided workers in legal proceedings incident to the collection of wages or other disputes, but in the main this function is performed by private organizations such as the numerous legal aid societies of the larger cities.

Another form of government action designed to aid workers has taken the direction of helping them to locate jobs and of providing some vocational training to make them more efficient. The first action led to the creation of a system of public employment offices undertaken with the purpose of decreasing the costs and lessening some of the evils existing in many private agencies and at the same time securing a better coordinated system for the country as a whole. The first public employment office was started in Ohio under an act of 1890, but, despite favorable action by a number of other states and various municipalities, there were less than 100 offices in operation at the outbreak of the first World War. Under the stress of that emergency an extensive Federal-state system was erected, which on the return of peace was generally allowed to lapse. Thereafter there was little progress until the depression again forced action and finally led to the Wagner-Peyser Act of 1933 which established the United States Employment Service. Although it was at first occupied largely with emergency measures, this service has developed a well-coordinated system which all the states had joined by 1938 under approved plans that include a Federal subsidy.

Federal aid for the other line of action was first provided by the Smith-Hughes Act of 1917 which created the Federal Board for Vocational Education. This act sought to provide free training in industrial, agricultural, and home economics work to both young and old. The states, all of which have joined in cooperation, are required at least to match the Federal grant. The resulting stimulus to state action has led to the establishment of several types of schools especially designed for the purpose, in which some 1,400,000 received training in 1934. An effort to raise and unify the standards for the training of apprentices was undertaken by the Federal Committee on Apprentice Training created in 1934.

Another field in which legislation has done much for the workers is that relating to occupational disease, safety, and industrial accidents. Although the accident rate in the United States has been relatively high, some industries have secured a notable reduction. It has been estimated that in 1939 the death toll from industrial accidents was 16,000, 106,000 suffered a permanent impairment of working functions, and over 1,400,000 sustained temporary disabilities. Besides much that was done through private initiative during the last 30 years, innumerable laws have been passed to compel the provision of better safeguards against accidents and the maintenance of more healthful conditions of work, and the general creation of state labor bureaus with more adequate systems for inspection

has led to an increased enforcement of the laws. Though this legislation has helped to reduce the tremendous social loss arising from these causes, further legislation has made great progress in shifting, from the worker to industry, the heavy losses still remaining.

Under the old common-law doctrine the employer was responsible for the exercise of reasonable care in guarding against accidents but, having exercised such care, he was not responsible to the worker for accidents arising from the occupational risks, the negligence of fellow servants, the contributory negligence of the worker, or the risks "assumed" by the worker. When to these numerous exceptions were added the worker's difficulty in meeting the legal costs of prosecuting a claim for damages and the meager net return generally obtained even when successful, it was seldom that the worker escaped most of the burden involved in loss from accident.

This situation has been remedied, (1) by very general statutory modification of the old common-law doctrines and (2) by legislation, chiefly since 1910, and favorable Supreme Court decisions in 1917, inducing or compelling employers to provide compensation for industrial accidents. Although the Federal government and nearly all the states have passed such workmen's compensation laws, they vary greatly in the scope of their application and do not always include compensation for industrial diseases. Whereas some concerns have their own schemes for meeting such risks, the tendency is to provide for it through private or state-controlled insurance. As a result the workman has more certain and adequate compensation, most of the burden is borne by the industry, as it should be, and much waste effort in the settlement of cases is avoided.

Down to 1935 there still remained, however, a large group of risks to which the worker was subject where little had been done in the United States by way of legislation to meet the problems involved. Sickness, old age, invalidity, and unemployment, one or another, if not all, commonly face the worker sooner or later and few are adequately prepared to meet the financial problems thus created. It was estimated in 1935 that half the population 65 years of age and over, or nearly 4 million, were dependent upon others for support, 1 million of these were being supported at public expense, and most of the rest by relatives and friends. Ill health was said to affect from four to six times as many workers as suffered from industrial accidents. Total unemployment was always existent for about 6 per cent of all workers and in times of depression might have to be faced by a far higher percentage.

Other countries had enacted wide-sweeping legislation to provide safeguards against these risks but the United States had hardly started. Only one state, Wisconsin in 1932, had an unemployment insurance law

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before 1935, though there were a few union or employer-union systems in operation. In the field of old-age pensions a start had been made by the Federal government and by some local units in providing for certain limited groups such as classified civil service employees or local teachers, firemen, and policemen. Only a few states had acted before 1929 and little more than half by 1934; and not all laws were compulsory. As for the other risks arising from nonindustrial sickness, death of the family supporter, etc., almost no legislative provision had been made, aside from funds-to-mothers acts. The worker had to fall back on such plans as private initiative on the part of employers, unions, fraternal organizations, and charitable institutions offered, or such insurance as he was able to procure. As has so frequently been the case, it required the suffering of the years of adversity to arouse the country to sufficient action to obtain a long delayed reform; the resulting Social Security Act of 1935 introduced what for the masses seems likely to prove one of the most sweeping reforms the government has enacted in recent years.

This law provided for (1) a Federal system of old-age benefits and insurance, (2) a state system of unemployment compensation, and (3) a group of grants-in-aid to the states to further welfare work for various special groups. Compulsory old-age insurance benefits, varying with their previous earnings but with \$85 a month as a maximum, were to be provided, beginning in 1942, for those 65 years of age and over. These were to come from a fund built up through equal contributions made by employers in the form of an excise tax on their pay roll and by employees through deductions from their wages or salaries, at a rate rising from 1 per cent each in 1937 to 3 per cent each in 1949. Several large groups of workers, however, were excluded from this system including, besides the self-employed, hired agricultural labor, domestic servants employed in homes, maritime workers in American waters, and those working for Federal, state, and local governments or for charitable, religious, and educational institutions. The number of workers covered has been estimated at 37 million or about three-fifths of those gainfully employed in normal times.

In addition, in order to provide for the needy aged until insurance payments became available and also to provide for such aged people as might prove in need thereafter, a system of old-age pensions was set up under which the Federal government undertook to match the funds up to \$15 a month per person of such states as adopted an approved plan for old-age pensions. By 1938 all states had adopted such a plan. Finally, there was a special group including employees of railroad, express, and sleeping-car companies and their subsidiaries that in 1937 secured a law providing for a retirement plan which is estimated to cover about 1,500,000 workers.

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In 1939 an amendment to the Social Security Law advanced to 1940 the date when benefit old-age payments were to begin, put the fund on a pay-as-you-go basis instead of accumulating a huge reserve, and extended benefit payments to new groups including aged wives and minor children, aged widows, young widows with minor children, and orphans. The maximum amount of old-age and blind assistance toward which the Federal government would contribute half was raised from \$30 to \$40 a month and larger Federal grants for dependent children were authorized. One important object of these measures was to enable the aged to live at home and decrease the number having to live in public almshouses or private charitable institutions, as well as to relieve relatives and friends of the burden of their support.

The provision for unemployment insurance excludes groups similar to those excluded from old-age insurance, and also employees of those having less than eight workers, except where the states set a lower limit. The fund out of which payments are to be made is based on a Federal pay-roll tax, originally 3 per cent after 1937 but subsequently reduced, of which 90 per cent was to be credited to employers who made payments to states that had approved unemployment insurance systems. This naturally put strong pressure to bear on the states and, since the tax was nationwide and no state adopting it was put at a disadvantage, all of them soon had approved systems. No state contribution to this fund, which was to be deposited with the Federal government, was required by the law, nor was any made by the employees, though a few states did adopt the latter. In most cases the benefit paid is about half the weekly wage up to a \$15 maximum; the minimum is three-quarters of the weekly wage or \$5, whichever is lower. Sixteen weeks is the most common limit for duration of benefit payments. It is estimated that the laws will cover nearly half the gainfully employed.

The most serious deficiency in the Social Security Act is the failure to make any general provision for health insurance and medical care. The filling of this gap may be considered the most urgent need in the social security program, though adequate provision will prove very expensive. There were, however, among the various forms of grants-in-aid provided for by the act, several that were designed to further health promotional activities on the part of the states. In addition grants also included provision for vocational rehabilitation of the physically disabled, for the needy blind, and for crippled and needy children. The duty of administering these and other provisions of the act was in the main vested in the Social Security Board, which was also made responsible for the determination of broad policies and suggesting changes.

A final group of laws deserving note dealt with arbitration or mediation in labor disputes. About half of the states have set up machinery for

the voluntary settlement of industrial disputes. In some states under certain conditions a public investigation is made compulsory, though in others it is optional; a few make provision for the enforcement of an arbitration award voluntarily entered into by both sides. Actually few states have accomplished much through voluntary arbitration. A series of Federal laws from 1888 on has sought to provide means for settling disputes on interstate carriers but, like the voluntary provisions of state laws, secured only moderate results. The Conciliation Service set up in 1914 in the Department of Labor has been distinctly successful in mediation work. The work done under the Federal Railway Labor Act of 1926-1934, described in an earlier chapter, has proved valuable and served as a basis of various state laws. In 1938 the Federal Maritime Labor Board was set up to provide mediation in the shipping industry.

Compulsory arbitration has faced serious constitutional obstacles as well as the general opposition of both employers and workers. The most prominent law of this type, the Kansas Industrial Court Act of 1920, was condemned by the Supreme Court, as far as its provisions were involved, in two cases upon which the Court passed. In cases where strikes threatened serious inconvenience to the public it has not been uncommon for some public official, such as the President, a governor, or a mayor, to offer mediation. The pressure to come to an agreement lest public hostility be aroused has often served to promote a successful outcome.

This summary of the labor movement and labor legislation since 1860 reflects the efforts of an economic group and of society to meet numerous problems that arose out of the rapid changes taking place in the organization of industrial society. It was slow, uphill work to develop the organization among the workers and recognition of the need for action among the public or the lawmaking bodies. Typically, reforms lagged far behind the need of the times, and still do. Nor did all the measures adopted prove wise; others, too frequently, were poorly administered. Yet looking back over the results and considering the magnitude and complexity of the problems involved, we must agree that much has been accomplished even if much still remains to be done. As a result, all things considered, the lot of the laboring class today is markedly superior to that which prevailed in 1860.

CHAPTER XXXVII

MARKETING AND TRADE, DOMESTIC AND FOREIGN, SINCE 1860

Introduction. That this period with its rapid growth in population and wealth should be marked by a great increase in the volume of trade was to be expected. But, just as during the preceding period, trade was greatly stimulated by better facilities for transportation and communication. How important these factors must have been will be better appreciated when we recollect that the railroad systems existing in 1860 were limited and that long-distance traffic on them was just beginning to be appreciable in the fifties. The real success of steamships in carrying ocean traffic was attained only during the last half of the century. At no other time in history has the geographic area of most markets been so rapidly extended as during this period. More and more commodities sold in markets that were national or nearly world-wide in scope, and this of course promoted greater territorial specialization and division of labor.

At the same time the great growth in the volume of trade necessitated a further expansion in marketing facilities, and the increased scale upon which trade was conducted made possible greater specialization of marketing functions and so wrought important changes in marketing organization. Often the marketing process became more complicated, and involved an increasing number of services before the goods passed to the ultimate consumer. In spite of economies obtained by more efficient marketing methods, the whole process grew to absorb a relatively larger volume of economic resources than ever before. Thus the typical volume of production is thought to have increased about nine times between 1870 and 1930, though the population increased only about three times and the number of those engaged in production only about three and one-half times; the number of those engaged in distribution increased nine times, and handled about the same volume of goods per capita as they did in 1870. As a result about twice as large a proportion of those engaged in gainful occupation was employed in distribution in 1930 as was the case in 1870. (See the charts on pages 726 and 1064.)

The Frontier Markets. The organization of the market varied greatly, not only as among different commodities and different regions, but as among different periods. The more primitive methods naturally prevailed

on the frontier or in isolated rural sections among the earlier settled regions. The organization typical of such sections, commonly centering around the nearest general store, has already been described. Here it will suffice to note a few features characteristic of the marketing organization that appeared as settlements extended over the Far West.

The unstable mining camps that sprang up there in the earlier years required little in the way of facilities for trade. Their main product, bullion, was easily carried out by packsaddle or the express company agent, and the few necessities not available in the vicinity and consumed by the predominantly male population lacking settled homes were brought in by pack train to the general store. Furs and livestock were the other staple products which, during the earlier period, were sent out to distant markets. The declining fur trade continued to be carried on by large companies while the rising cattle trade was made possible by driving the animals to the nearest railroad point for shipment to the East. The settlements on the Pacific coast had access to world markets through ocean transportation and thus were able to send out the growing surplus of grain and bring in manufactured or other commodities not produced in the locality. San Francisco was the chief trading center through which these supplies were distributed into the interior and this trade extended well into the Great Basin to the east of the Sierras. For the section farther east Denver was the chief distributing center.

In the interior sections devoted to agriculture, the problem of markets presented even more difficulties than confronted the early settlers in the Middle West. This vast area had practically no river transportation except the limited facilities provided by the Missouri and the Columbia, consequently railroad transportation was essential before anything but local markets for most commodities could develop. Thus, unlike the region east of the Missouri, railroads were extended westward into this section ahead of any considerable volume of settlers; in fact the railroad was often the pioneer opening up vast tracts ahead of any permanent settlement. When settlers came they generally tended to locate near the railroads. The result was that many of the settlements in the Far West enjoyed access to distant markets almost from the first and their development was not limited by poor marketing facilities such as had confronted the pioneers to the eastward at the earlier period. With distant markets for the staple products available, greater specialization was possible and the market organization of this region quickly took on the character of that in the older sections of the country.

Changes in Rural Markets. The growth of the rural population in density and wealth and the vast improvement in facilities for transportation and communication were the chief factors in altering the marketing organization typical of the rural districts. As better marketing facilities

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became available, the rural population both bought and sold more goods; the opportunities for specialization in one or another line of production increased; each locality tended to become less and less self-sufficient economically; and, as the markets for various commodities expanded in area, the rural population found itself increasingly bound up with markets that were national or international in extent. Everywhere greater specialization in marketing facilities was developed. Though the general country store by no means disappeared, it witnessed one after another of its commodities pass into other channels of trade. This was particularly true of the products that the farmer in earlier times had been accustomed to sell to such stores. The farmer selling a smaller variety of things produced in small quantities and specializing more in a few staples such as dairy products, grain, livestock, cotton, fruit, and garden truck sold these staples to dealers specializing in handling the staple, or in more recent years disposed of a growing proportion through commission men or his own co-operative marketing organization.

Similarly, though to a less extent, the farmer secured more of his purchases through other channels. The growth of neighboring towns with specialized retail stores and easier access to these towns, especially after the advent of the automobile, provided better opportunities for securing many commodities; in some sections cooperative purchasing societies provided another channel and the rise of great mail-order houses combined with the introduction of rural free delivery and the parcel post afforded still another easy means of contact with distant markets. In certain lines of goods, such as farm machinery, the manufacturers secured agents in the rural districts and through them commodities passed direct to the consumer. Facing such conditions, the country peddler of earlier times practically disappeared, and where the general country store survived these inroads upon its trade, it found its business more and more confined to the handling of a class of goods in constant demand and commonly bought from hand to mouth such as groceries. The storekeeper, himself, instead of infrequent trips to the city to obtain new stock was in frequent touch with jobbers and the smaller wholesale distributors of the nearest city. Thus the general tendency was to link up the marketing organization of the country districts more and more closely with the organization that had its centers in the great cities.

Trade and Markets of the City. The important developments in market organization naturally occurred chiefly in the great trading centers of the cities. The effects of the changes that took place there were felt over the whole country as the ramifications of this central organization were extended over an ever widening area. Unfortunately no adequate historical study of these changes has ever been made but it is at least possible to point out some of the outstanding features of this development in most

of which the tendency toward greater specialization was the chief characteristic.

In the retail trade of cities the growth of population and wealth, together with increasing sales to people who came some distance to the city to make certain purchases, so increased the volume of trade that marked specialization was possible. Large retail districts developed in the sections most accessible and here were located not only the stores selling common necessities but the most highly specialized stores dealing in expensive luxuries. In the larger cities, outside of this central retail district, minor retailing centers developed; here the tendency was to sell goods widely used and of a type and quality adapted to the wants of the people of the district. The farther away from thickly settled neighborhoods one went, the less the specialization and the greater the tendency to deal in only a few necessities.

In contrast to the specialty store is the department store, which is practically a development of this period and illustrates the tendency toward large-scale retailing through what may be called a form of integration. Generally developing out of the dry-goods business, these stores have added one department after another until the largest now supply very nearly everything that the family uses, not to mention the wide variety of services provided for the convenience of its customers. Occasionally integration is carried further by acquiring control of the manufacture of some of the goods dealt in or entering the wholesale trade as well.

Another development which in more recent times has spread rapidly and met with great success is the chain store. This may be said to represent an effort to combine some degree of specialization with large-scale retailing; in cases where the chain is controlled by the manufacturer of the goods sold, it is the product of integration. The chain store commonly deals in a line of goods in general demand, such as groceries, drugs, notions, and dry goods, though those controlled by manufacturers cover a narrower field. Some chains are small and confined to one locality, others to one general section; still others are scattered through cities over most of the country. Within the last few years the rise of the supermarket has made another type of retailing prominent. Centering about the sale of food products of all kinds it has sought to offer low prices by securing a large volume of sales and eliminating the less essential forms of service.

A fourth important development in the retailing field, also designed to secure the advantages of large-scale business, is the mail-order house. Though first started about 1870, the great growth of this form of retailing has occurred within the last 40 years. Although located in large cities, most of the sales are made to the rural population; however, retail outlets in the larger cities have recently been established. The larger mail-order

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houses supply an endless variety of goods, sometimes owning the factories in which these goods are made, but there are others confining themselves to one general line. In addition it may be noted that some manufacturers of specialties depend largely on mail orders for the sale of their output, this being one form of the growing movement to eliminate the middleman and sell direct to the consumer. The manufacturer-owned chain store and the organizations of retailers or consumers designed to buy direct from the producers illustrate the same trend.

In the wholesale trade of the cities considerable progress was made in the introduction of the highly organized type of market provided by the produce exchanges. As the successful operation of such an exchange depended not only on a large volume of trade but on standardization of the products sold, the progress attained in establishing grades and standards was an important factor in this development. Grain exchanges had been organized before 1860; during this period several new ones were formed at important primary markets in the Middle West. The first cotton exchange was started in New York in 1870 and the second in New Orleans the following year. Since then numerous other products have been added to the list of commodities sold in this way, in some cases by the organization of a new exchange, in others by providing new facilities in the existing exchanges. These exchanges provide the freest and most sensitive market for the working out of the forces of demand and supply, and thus tend to stabilize prices. Through the device of future sales they provide a form of insurance against losses from price fluctuations by the transfer of this risk to specialists. On the other hand, they have not been entirely free from abuses incident to speculative manipulation or unfair practices and have recently been the subject of legislation to provide better control.

One or another form of the wholesaling organizations located in the cities was the medium through which the great bulk of raw materials passed to the manufacturer and the finished products in turn were distributed to others. Wholesale houses, manufacturers' outlets, jobbers, sales agents, brokers, and commission men became the most common types of middlemen. The type of channel followed naturally varied greatly among different kinds of commodities and often in the case of a single commodity. Agricultural products used as raw materials had to be gathered together from the scattered small-scale producers so that they could be sold in large quantities to the manufacturer. These products typically passed through the hands of one or more buyers in the rural districts before shipment in quantity to the wholesaler in the city who sold direct or through commission men to the manufacturer. Farm products practically ready for consumption, such as garden truck or fruit, were shipped to city wholesalers or commission men, sometimes sold at

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auction, and not infrequently passed through the hands of a jobber before reaching the retailer.

The use of commission men showed a tendency to decline at this period and it was in this type of product that their use continued most common. The growth of agricultural cooperative marketing associations tended to eliminate some middlemen though it was primarily owing to the desire of the producers to control the marketing process themselves and so represented another phase of the tendency toward integration. In the case of minerals, where production was relatively concentrated, it became very common for the producer to sell direct to the user through his own agency located in the cities and it was not often that more than one middleman was employed.

In the sale of manufactured goods, where production was relatively concentrated, the wholesaling problem was one of distributing the goods to the users. Where they were used in other processes of production, such as machinery or semifinished commodities, where sales were more concentrated, it was frequently possible to sell direct to the user, perhaps through an agent or traveling salesman; where an independent middleman was resorted to one was commonly sufficient. Where the product was one for household consumption and commonly sold through retail stores, a more elaborate distributing system was likely to be employed, often involving the services of more than one middleman. Thus such staples as groceries, dry goods, and hardware may be sold through a broker or agent to a wholesaler or perhaps a jobber before reaching the retailer; if the retailer buys rather small quantities another jobber handling a general line may come between him and the wholesaler. Though most manufacturing plants were located in cities, it was frequently found advantageous to have a sales office or agent in one or more of the great metropolitan centers where buyers tended to congregate. This practice was often responsible for the employment of another middleman in the distributing process.

Along with the tendency to make use of more specialized middlemen, there appeared during this period an effort to eliminate the middlemen or at least to shorten the distributive process. Pressure of competition and desire to lessen the costs of distribution provided an incentive, and the improved means for communication, notably the growth of advertising, greatly facilitated the move, which was limited mostly to manufactured goods destined for household consumption. One result was a marked decline in the use of traveling salesmen. Another tendency of somewhat different character appeared in the movement among producers to get control of a portion if not all of the marketing process. This was but a phase of the widespread tendency toward integration. Sometimes it resulted in eliminating one or more steps in the process of distribution,

but usually it simply meant that the producer became a distributor also. Among the reasons for this move, the desires to control the distributing channels, to lessen marketing costs, and to secure the middlemen's profit were most prominent.

With the increased volume of trade and the growth of services afforded by middlemen came other developments in the distributive process, the most important of which deserve mention. The storage or warehousing business was greatly expanded, notably with the introduction of efficient cold-storage methods. In the case of various products, standardization of grades aided by government action, careful measures for control of the business, and the spread of the use of warehouse receipts greatly facilitated trading and its financing. The tremendous expansion of advertising, on the part of distributors as well as producers, has already been referred to and with this specialization has resulted in the growth of advertising and sales promotion agencies. The growth of cooperative associations, both for selling and for buying, most marked among the agricultural population, has also been mentioned. Among certain groups of manufacturers trade associations and similar organizations have been active in introducing improved methods in various phases of the process of marketing their products. Such organizations have furthered the establishment of standards and grades, improved accounting methods, gathered extensive information as to market conditions, and in some instances, notably foreign trade, have undertaken the actual marketing of goods. The use of the auction system as a regular method for marketing has tended to decline in relative importance. It is now most widely employed for the sale of fruits and garden truck in local city markets, and is also important in the sale of leaf tobacco, furs, and floor covering.

The Distributive Process at Present. Because no adequate data were available, the preceding account of developments in the field of distribution since 1860 has of necessity been rather vague and general. Fortunately the Census of 1930 included this field in its enumeration so that we now have for the first time a fairly clear and comprehensive picture of the volume of domestic commodity trade and the structure of the distributive system which handles it. The census figures, which are for the year 1929 before the effects of the depression had become very marked, show total retail sales of \$49 billion of which over a fifth was made by the food group, almost a fifth by the automotive group including filling stations, and nearly a seventh by the general merchandise group including department, dry-goods, and variety stores; the next most important group, that selling apparel, handled about one-eleventh of the total. This business was handled by 1,543,158 stores of which less than 16 per cent were owned by corporations, though this group had almost half of the total sales. Classified by types of operation single store independents

had nearly two-thirds of all sales, sectional and national chains one-eighth, and local chains one-fifteenth. Over two-fifths of the stores had annual sales of less than \$10,000; three-quarters of them of less than \$30,000, the total for this group constituting less than a quarter of all retail sales. On the other hand the stores with annual sales of over \$1,000,000—0.14 per cent of all retail stores—had an eighth of all retail sales.

The wholesale trade as classified by the census was carried on by 169,702 establishments with total net sales of over \$69 billion. Somewhat more than half of them were under corporate control and had three-quarters of the total sales. Of the various types of wholesalers the group that limited itself to wholesaling made over two-fifths of all sales; manufacturers' sales branches and agents or brokers each made about a fifth of the sales; the remainder was widely scattered among various types of which the assemblers and country buyers with nearly 7 per cent of the sales were the most important. Naturally there was a marked tendency for the wholesale trade to concentrate in certain localities; almost half the total sales were made in four states, New York having a quarter of the total, Illinois a tenth, and Pennsylvania and California about one-fifteenth each. Among the cities New York was far in the lead with Chicago a poor second, but still far above Boston, Philadelphia, San Francisco, Detroit, Pittsburgh, St. Louis, and Kansas City, which ranked next in order.

Much the best general survey of the flow of the main classes of goods through the different channels of distribution is provided by a recent study made by The Twentieth Century Fund,¹ the results of which are depicted in the chart on page 774. Starting, as there indicated, with goods valued at \$21.7 billion obtained from agriculture, the other extractive industries, and imports, \$9.7 billion of this goes direct to some type of intermediary distributor, transport costs being added on the way, and \$7.2 billion direct to manufacturers; only a small portion goes direct to the retailer or to the group of terminal buyers consisting of consumers, institutions, utilities, and exporters, or is used by the extractive industries themselves. Of the goods used by manufacturers nearly one-half is bought direct from other manufacturers and almost two-fifths from intermediary distributors. The goods sold by manufacturers have a total value of \$69.6 billion, of which over one-third is sold to other manufacturers, almost one-half is disposed of through some intermediary wholesaler, about one-sixth goes direct to terminal buyers, and less than one-tenth direct to retailers. Of the \$69.3 billion of sales by intermediary distributors two-fifths goes to retailers, somewhat less than a quarter each to

¹ "Does Distribution Cost Too Much?" The Twentieth Century Fund, New York, 1939. This section of the chapter is based on that study.

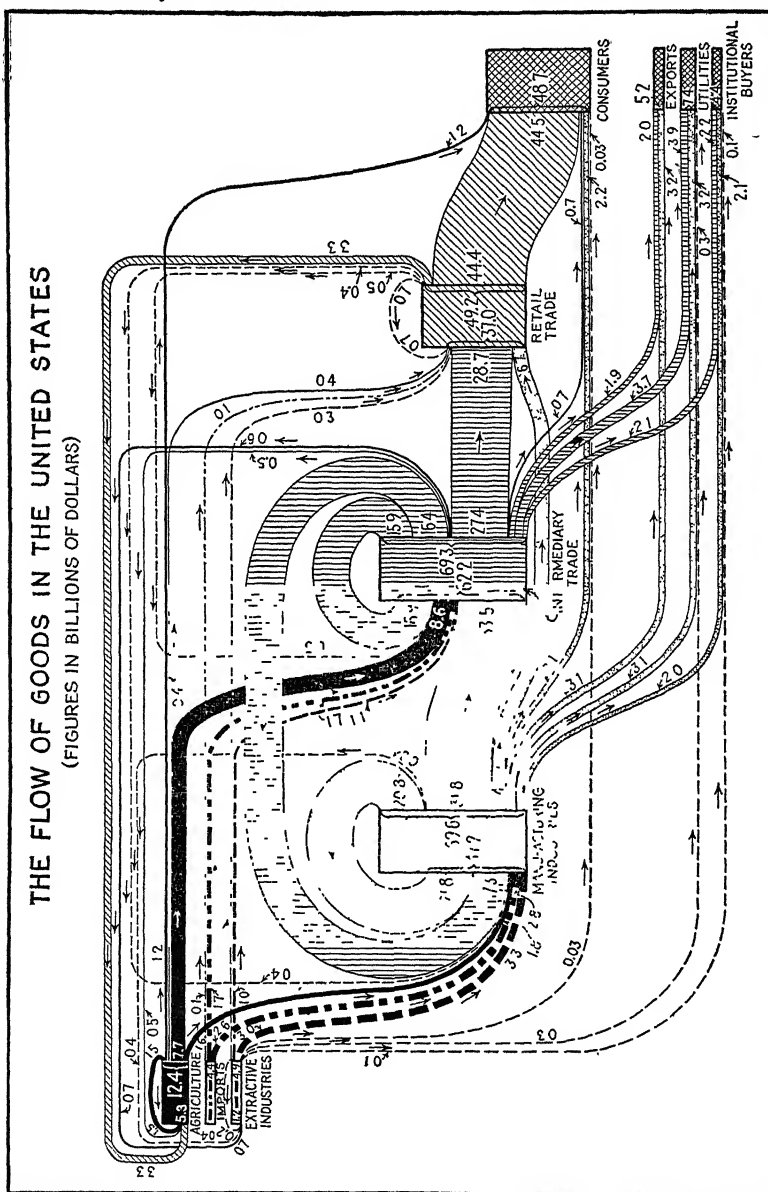


FIG. 57.—The flow of goods in the United States (Reproduced by permission of The Twentieth Century Fund from "Does Distribution Cost Too Much?")

manufacturers or other intermediary distributors, the remainder to terminal buyers. Of the total retail sales of \$49.2 billion nine-tenths goes to consumers and most of the remainder is sold for use in agriculture. The result of all these sales, including \$8.7 billion paid for transportation, totals \$218.6 billion; while the total of purchases by all producing and selling agencies is \$153 billion. The difference, \$65.6 billion, between the two sums represents the total cost of producing and distributing goods and is equal to the total outlay of terminal buyers for finished goods. It is significant of the importance of distribution in our economic order of today that the total of all sales is more than three times the value of the finished goods purchased by terminal buyers. The fact that retailers' sales make up less than a quarter and those of the intermediary wholesaler group less than a third of total sales suggests the relative importance of these two groups of distributors.

Of the \$65.6 billion representing the total cost of producing and distributing goods, it is roughly estimated that 59 per cent or \$38.5 billion represents the total cost of distribution which is made up of \$12.6 billion for retailers' costs, over \$9 billion for manufacturers' distributing costs, almost as much for transportation charges, \$7 billion for the various intermediary distributors' costs and a few minor items. This means that in general it costs the country about 50 per cent more to get goods distributed than it does to get these same goods produced. This suggests why in general there seems to be such a wide spread between retail prices and the prices received by the producers. It also suggests how important the field of distribution might become in lowering costs and thus raising the standard of living provided means could be found to introduce more efficient methods.

Criticisms of the Marketing Organization. This trend of developments in the marketing processes as a whole has resulted in considerable criticism of the existing organization on the ground that it is inefficient and wasteful. More particularly it is asserted that products are passed through the hands of too many middlemen on the way from the producer to the consumer, resulting in an unnecessarily large gap between the price received by the producer and that paid by the consumer. To what extent this is justified is not as yet determined, but the movement to reduce the number of middlemen and sell more directly and the success attained by it in various lines certainly indicate that the criticism is well grounded in some cases. Additional evidence is afforded by the growth of organized efforts on the part of those likely to lose trade by more direct selling to check the movement, as reflected in the opposition to chain stores, mail-order houses, or cooperative organizations, and by the activities of associations of retailers, wholesalers, and manufacturers designed to prevent more direct sales and to protect their interest in the older methods.

On the other hand people too frequently jump at the conclusion that there must be waste in the distributing process if the gap between the price received by the producer and that paid by the consumer appears to be great. It is too often assumed that the costs of production must make up nearly all of the total cost in preparing a commodity for the consumer in the form and at the time and place desired. This is due to the tendency to assume that because little or no change in the form of a product occurs after it leaves the producers—since all the functions performed in the process of distribution commonly result in little visible and tangible alteration—therefore the services rendered must have been of slight cost or value; if the distributing costs make up an appreciable part of the final cost, it must be due to waste or excessive profits in distribution.

Such a conclusion may or may not be correct. But we must not forget that the general trend of development has been greatly to increase the amount and variety of the services performed in the process of distributing commodities. An increase in the costs of distribution was to be expected, except in cases where better technological processes, the economies of specialization and large-scale distribution and more efficient organization were sufficient more than to offset this. Also, it must not be overlooked that, except in the case of transportation, the processes of distribution have afforded far less opportunity for the introduction of machine methods than many lines of production. Yet, even where not so offset, the increased outlay on the process of distribution cannot be assumed to be a net loss for society. We could completely eliminate the middleman and all costs of distribution if each family would produce what it consumed, as the early frontiersmen nearly did. Specialization and division of labor can be secured only through exchange and trade and the whole trend of our development tending toward a national or world-wide specialization involves a greater expenditure in the process of distribution unless this can be more than offset by improvements in transportation and other parts of the distributing organization.

Where not so offset, the greater cost for distribution must be considered as a necessary outlay to secure the advantages of specialization in production. We can reasonably assume that, unless the advantages of specialization in production more than offset any increase in the costs of distribution, the general movement toward specialization would not have occurred. Since this movement has been one of the most dominant and widespread characteristics in the evolution of industrial society it is to be expected that the process of distribution would absorb a growing proportion of the economic resources employed in satisfying our wants. Thus the fact that distributive costs may be great does not necessarily mean that they represent a social loss. Obviously, however, this conclusion does not imply that the existing distributive organization involves no unnecessary waste.

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Another criticism asserts that there is an unnecessary duplication of facilities for selling, chiefly seen in the retail trade. Certainly when we consider the number of stores selling similar products located in close proximity to one another it would appear that there must be considerable ground for this criticism. Running a store is a line of activity that is relatively easy to enter upon and few people seem to consider that any particular ability is required for the undertaking, in spite of the fact that it is a field where competition is keen. In consequence the number of those who fail to make a success is relatively large. This means inefficiency and loss, both for the individual concerned and for society. As far as retailing is in the hands of fairly efficient men, the most that can be said in favor of such a multiplicity of stores is that it affords a greater variety of services and goods, greater conveniences in accessibility, and such other gains as come with increased competition. The losses from duplication of plant and effort, owing to the smaller amount of fixed capital employed, are apt to be less than would be the case in many other lines of economic activity.

Two other points are among those most stressed by the critics of our marketing organization. One of these, the enormous expenditure involved in modern competitive advertising, has already been noted in dealing with the means of communication. The other relates to the claim that the large gap between the price paid by the consumer and that received by the producer is due to excessive profits obtained by the middlemen. Though adequate information on this point is not available, there is excellent reason for doubting the general validity of this charge except in a period of rapidly rising prices. At such a time the middleman is apt to reap large profits, but he is by no means the only one to enjoy such gains, and he has to face the possibility of heavy losses if the price level drops.

In general, wholesaling and retailing, particularly the former, are highly competitive lines of business; with few exceptions, the general trend of our economic development has been to make them more keenly competitive than ever before. It is only in certain lines of industry where a relatively large proportion of fixed and highly specialized capital is employed that competition, resorting to the most extreme cutthroat methods, is more severe. It has recently been estimated that the average net profit of all retailers is under 2 per cent, and possibly 1 per cent, of their net sales; that of wholesalers or other intermediary distributors is probably under 1 per cent of their sales. Although this is no measure of the rate of profit that distributors make on their investment (that depends on the rate of turnover of stock and other things), it does indicate that, whatever the rate may be, it cannot be charged with much responsibility for high prices in general if it takes on the average only about 3 cents of the consumer's dollar.

It is true that in certain lines efforts have been made to organize the wholesalers and retailers and check competition, chiefly through trade

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associations; but there appear to be relatively few instances where such organizations have proved powerful enough to secure exorbitant monopoly profits. Consequently, where high profits have been secured by such middlemen, there is greater likelihood that they are a product of marked ability and efficiency than would be the case in many lines of industry. However, recent legislation, previously described, which tends to check competition between distributors, requires some modification of this statement. Where the costs of the middlemen's services are really excessive, it is chiefly due to the wastes that attend our competitively organized industrial society and must be balanced against such gains in efficiency and progress as competition can yield. A further reduction of these wastes is still compatible with the maintenance of an essentially competitive system.

The Main Courses of Domestic Trade. The courses followed by domestic trade were mainly determined by the territorial specialization of industry that developed with the growth of population, the opening up of new regions, and the improved means of transportation. In the case of commodities entering into foreign trade the courses followed in internal trade were shaped by the ports through which the commodities were exported or imported and the locality where they were produced or consumed.

The North Atlantic states were devoted chiefly to manufacturing and also handled most of the import trade and a considerable portion of the exports. From this section manufactured goods and imports, partly raw materials and partly finished goods, went out to the rest of the country. From other sections it received the greater portion of the raw materials worked up in its factories, most of the food stuffs consumed, nearly all of the oil, a portion of the soft coal, and some domestic manufactures.

The group of states lying north of the Ohio and east of the Mississippi rivers was the most evenly balanced in its lines of economic activities of any section in the country. It developed during this period a considerable volume of manufacturing, based mainly on easily accessible raw materials, and typically turned out less highly finished products than did the Eastern manufactures. A large amount of the output was sent to other sections of the country or exported. It also produced a considerable proportion of its food supply and shipped large quantities of meat and dairy products. Though some anthracite was brought in from Pennsylvania, the output of soft coal was practically sufficient for its needs. Up to about 1900 the output of oil and lumber more than met the requirements of this section, but since then increasing quantities of both have been brought in from the South and the West.

The South specialized in the extractive industries but made progress in developing several lines of manufacturing based on its raw products,

such as cotton, iron and steel, lumber, petroleum, and tobacco. Until recently between one-half and two-thirds of its great staple, cotton, was exported and such of the remainder as was not manufactured locally was shipped north. Most of the surplus of the other extractive products including both raw materials and foodstuffs, such as fruit and vegetables, went to the Northeastern or North Central states, together with a portion of the South's output of manufactures. The flow of goods into the South consisted mainly of manufactures, both domestic and foreign, coming from the North, and a portion of its food supply coming from the North Central or Western states.

The West was also devoted chiefly to the extractive industries and manufactured only a few products based upon such staple raw materials as livestock, grain, lumber, and petroleum. Such raw materials, with the addition of copper, lead, zinc, gold, silver, wool, and fruits, constituted the chief shipments of this section to other sections or to foreign countries. Such imports from the Far East as came in through the Pacific ports were generally forwarded to the East for distribution, raw silk being the most important item. Manufactured goods made up the greater portion of the commodities obtained from elsewhere, though it was also dependent upon outside sources for certain food supplies and a portion of its coal requirements.

From this summary of the chief factors in the trade of each section it will be seen that the great volume of domestic trade moves along east and west lines, manufactured goods predominating in the westbound traffic, though coal is important in bulk; products of the extractive industries, a portion of which have been manufactured, make up most of the eastbound traffic. The movement of goods between the northern and southern portions of the country is much smaller in volume, the southbound traffic consisting mainly of manufactures and coal and the northbound traffic of raw materials for manufacture from the extractive industries. When the relative density of population is taken into consideration, it is obvious that the greatest trade channel is that running east and west in the northern half of the country between the Atlantic coast and the Missouri River.

Within the different sections, though sometimes overlapping their boundaries, there developed channels of trade that centered in the large commercial cities. Such cities became the main gathering place for the surplus products of a large hinterland, some of which were distributed to other portions of the district and the remainder shipped out from this gathering point, perhaps after being manufactured, to other districts. The wholesale trade in commodities brought in from other sections centered in these cities, from which these goods were redistributed through the tributary hinterland. The hauling, warehousing, and other

facilities employed in carrying on the trade of the district also tended to centralize in these cities. Such a city together with the tributary hinterland has been called a "metropolitan economy" and in this country is illustrated by such places as Boston, New York, Atlanta, Chicago, Kansas City, and San Francisco. An appreciable, though ordinarily a minor, portion of the volume of commodities originating in such a metropolitan district is distributed and consumed within the district. Trade with the rest of the world tends to center in the dominating commercial city which commonly makes its contacts with other regions through similar cities elsewhere.

Barriers to Internal Trade. One of the great economic advantages enjoyed by the United States as compared with other countries consists in the almost complete freedom of trade that prevailed in what has come to be by far the richest market provided by any nation in the world. For this reason numerous recent efforts on the part of the states or other groups to erect barriers to this trade show a tendency that may well be viewed with serious concern. Though in evidence before the depression, that event gave a decided impetus to the movement, which was based largely upon the desire of various state interests to secure protection from outside competition. Since the control of interstate commerce is vested in the Federal authority, the power of the states to erect barriers is greatly circumscribed; yet means have been found through various forms of taxation, health, sanitation, marketing, and other regulations to create serious obstacles to interstate trade in various commodities and services. Often there has been a perfectly sound reason for the restriction, as in the case of the laws needed to protect health, to prevent the spread of insect pests and diseases, or to check the evasion of local taxes; but only too frequently these objectives have simply served as a screen to lessen competition from outside the state and the administration of the laws, where any leeway is permitted, has often been directed to the same end.

The barriers thus erected have taken a variety of forms. In the field of agricultural products, where a great many cases are found, they may be imposed under health, sanitary, and quarantine measures or under regulations regarding grades, standards, and labeling which, however desirable, may be so lacking in uniformity among different states as to cause much unnecessary trouble and expense. Similar variations exist in the regulations governing motor vehicles; license charges may be made excessive and the establishment of a system of state ports of entry often leads to retaliatory action by neighboring states and starts a miniature conflict. Within a state, city ordinances, often combined with union activities, may be employed to protect local trucking business. The power given the states under the Twenty-first Amendment to control the

liquor trade has been perverted to give protection to state products. The numerous laws requiring that various supplies purchased for use by the state shall have been produced, or at least bought, within the state reflect the same desire to protect "home industry" and check an outflow of money that lies back of the various campaigns to "buy at home" regardless of whether "home" is a city, a state, or a nation.

Foreign Trade—Changes in Organization. Turning now to the foreign trade of the country and taking up first its organization, we find that the outstanding developments during this period were similar in general character to those occurring in the field of domestic trade. Because of the great growth in the volume of trade, one notable tendency was toward increased specialization of functions in the various activities in carrying on this trade. A second important tendency was toward integration of the various functions; often closely associated with integration was a movement toward concentration.

Greater specialization is seen in the tendency of importers and exporters to confine themselves to one or two staples, or a small general class of commodities, or the products of one country. An increasing number of those engaged in foreign trade confine themselves to wholesaling and leave the retailing to others. Specialized brokers and commission men are more frequent than formerly. Various services connected with foreign trade and once frequently supplied by the trader are now provided by specialized groups, except where integration has developed. The merchant seldom has his own ships and depends more on brokers to secure cargo space, the chief exception being a few large producer-shippers with fleets carrying such products as oil, steel, or bananas; he almost invariably depends on marine insurance to carry the risks involved; he relies more on warehousing facilities provided by others; he finds financial institutions prepared to supply more and better facilities for financing his transactions and brokers to attend to the details incident to getting his imports through the customhouse.

The tendency toward integration in foreign trade, as elsewhere, has not necessarily involved any check upon specialization so far as the activities of individuals are concerned. It has generally gone along with large-scale enterprise which, though involving centralization of control and the carrying on of a multiplicity of activities by one concern, has still made possible great specialization in the work of individuals under this unified control. The advantages obtainable through integration in the field of foreign trade were in general much the same as those to be secured in other lines of economic activity.

The particular direction that integration took naturally varied with different trades. Big manufacturing concerns doing a large export business often organized a special corporation to carry on this trade, and set

up branches with warehouses and a distributing system in foreign countries. In some cases they owned a fleet of ships in which the products were transported overseas, notably in cases where a special type of vessel was desirable, as with oil or bananas. Similarly, manufacturers using large quantities of imported raw materials and large-scale retailers of imported finished products, such as department stores, often established their own agencies for handling this trade.

Such tendency toward concentration and combination, independent of any domestic combination, as has appeared in foreign trade is comparatively recent in development. In some cases large foreign buyers of American raw products used in manufacturing have joined together for the purpose of bargaining more effectively in their purchases, and the example thus set has occasionally been followed by importers in this country. With the growing interest in foreign markets American producers have joined together in associations to control the marketing of their goods in foreign countries. In 1918 Congress passed the Webb Export Combination Act exempting combinations formed to engage in the export trade from the prohibitions of the antitrust laws, provided they did not tend to restrain domestic trade. Under this law exporters in various lines of commodities have joined together in associations with the object of promoting their foreign sales and reducing the costs through the larger volume thus secured. Such organizations have proved most useful to concerns whose foreign business was not extensive. Concerns already having a large and well-developed export trade have commonly preferred to retain their own organization. In some cases such associations appear to have been formed to provide a better outlet for surplus production and prevent unloading on the domestic market.

The Merchant Marine—Technological Development. Although the great innovations in shipbuilding marked by the introduction of iron in construction and the use of steam for motive power had been initiated before 1860, it was not until the latter portion of the nineteenth century that the revolutionary effects that followed had spread to most of the world's shipping and ocean carrying trade. The early steamships had not been able to compete with sailing vessels in carrying anything except passengers, the mail, and the most valuable cargo. Their ultimate success in securing the bulky and less valuable freight was chiefly a product of improvements in the marine engines reducing the space required for fuel and the introduction of cheap steel, both lighter and stronger than iron, in the construction of ships, which made much larger vessels possible.

Improvements along these lines were taking place throughout this period. Steel began to be used in the construction of the hull about 1880; triple and quadruple expansion engines soon followed; twin screws were

introduced about 1888, followed in the first of the twentieth century by triple and quadruple screws, the turbine engine, the internal combustion engine, and engines using oil instead of coal. The increased efficiency in the engines resulted in reducing the amount of coal required to produce a unit of power to less than a quarter of that used in the early engines; this not only decreased the cost of fuel but increased the space available for cargo. The substitution of oil for coal made possible a further saving in cargo space, and a similar result was secured by the general establishment of stations throughout the world where supplies of coal or oil could be obtained. As the growth in the volume of traffic made it worth while to build vessels especially designed to transport certain commodities, refrigerator ships were introduced, beginning about 1880, followed by tank vessels for transporting oil, and others made to carry ore. As one improvement after another increased the advantages of the steamship in lowered costs of transportation, greater speed, and less risk, the sailing vessel was gradually displaced, but it was not until the last decade of the century that the steam tonnage took the lead in world merchant shipping. After this period, the really rapid displacement of the sailing vessel took place; by 1920 the sailing tonnage had fallen to barely one-twentieth of the total and today it has almost disappeared.

Developments in the Organization of Shipping. The outstanding developments in the organization of shipping during this period were primarily a product of the changes in shipbuilding and the growth in the volume of traffic. As the cost of vessels steadily mounted till the typical freighter cost several hundred thousand dollars and the transatlantic passenger steamships cost many millions, it became impracticable for the individual or the ordinary partnership to own them, all the more so when a regular line of ships was organized. Resort was had, therefore, to the corporate form of organization and a steadily increasing proportion of world shipping came under corporate control. This tendency, however, was more marked in the United States than in most foreign countries. The enormous growth in the volume of traffic made it worth while to establish an increasing number of regular lines of ships that followed fixed routes at frequent intervals. These lines took over an increasing proportion of the ocean-borne traffic, so that the tramp vessels, following irregular routes and going from port to port wherever cargo was momentarily available, steadily declined in importance. As the larger companies established new routes or took over old lines under independent companies, the tendency toward concentration of control became more marked. At the same time in the coastwise trade there appeared a movement among the railroads to get control over shipping lines, in some cases to control competition, in other cases to increase their traffic by establishing connections with important ports not reached by rail.

In this field, as in so many others, the period is marked by an extensive development of combinations taking the form of pools and commonly known as shipping rings or conferences. The shipping industry is one that has been subject to marked fluctuations owing to the difficulties in securing a ready adjustment between demand and supply. In periods of active demand for shipping, as in a trade boom or a war, ship construction is actively pushed; when a reaction sets in there is a surplus of tonnage available. As the modern ship can be kept in service around 20 years, an excess supply does not quickly disappear. But since there is so much capital invested and it is expensive even to tie a vessel up in port, the tendency is to operate the ship even when cargo rates do not yield a fair return on the investment, and competition is consequently very keen. Another difficulty arises from the fact that there are very few ports where the outgoing cargo is approximately equal to the incoming cargo in volume of space and character of service required, so that there is generally a surplus of cargo space one way or the other. The establishment of regular lines with definite dates of sailing between fixed ports has somewhat tended to increase the difficulties in the adjustment of demand and supply, and such lines have faced the competition of the tramp vessel free to go wherever the most profitable cargo was to be obtained. Such conditions, combined with the greater concentration of control that came with the growth of great shipping lines, explain the tendency toward combination in this industry.

The formation of shipping rings began in England about 1875 and after a couple of decades spread fairly rapidly among the steamship lines engaged in ocean transportation. In 1913 a congressional investigation disclosed at least eighty agreements or informal understandings affecting transportation over different routes to or from the United States. Since more cargo space is required for exports than imports, there is keener competition for the import trade. Agreements, therefore, were more common in the import trade, though fear of violating the antitrust laws was a minor factor in the situation. Understandings as to fixed rates and other points checked competition among the members of the conference; competition from outsiders was checked by the extensive use of a system whereby a rebate was eventually returned to shippers who in the meantime had used only conference ships. After the rule-of-reason interpretation of the antitrust law in 1911, several lower court decisions, though condemning certain practices, upheld shipping conferences as reasonable; and in 1916, following investigation of the subject, Congress passed the Shipping Board Act under the provisions of which shipping agreements were authorized subject to the approval of the board, though discriminatory rates were prohibited. These provisions, the reverse in principle of the antipooling clause of the Interstate Commerce Act of 1887, reflected

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the beginning of a growing tendency to modify the indiscriminate and absolute condemnation of all combinations that had marked the earlier reaction to the combination movement. The law was based on the belief that, under the conditions developed in modern capitalistic industry, absolute competition does not *invariably* produce the most desirable results.

The Growth of the Merchant Marine. The chart on this page reflects the changes taking place during this period in the two main branches of our merchant marine. Since the factors affecting the growth of each were

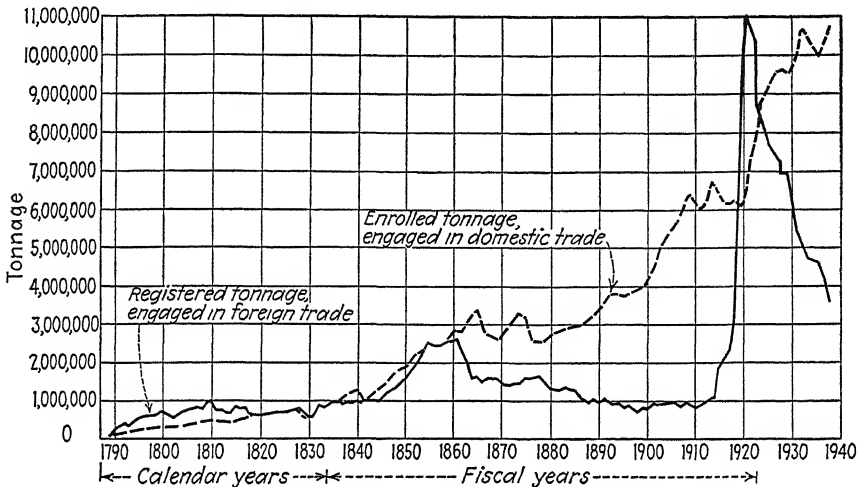


FIG. 58.—Tonnage of the merchant marine of the United States since 1789.

very different, they will be considered separately, first taking up the enrolled or licensed tonnage engaged in the coastwise, lakes, and river traffic. In 1860 the shipping engaged in the domestic trade was 2,800,000 gross tons and constituted a little more than half of the total merchant marine. The Civil War period brought little change in this branch of our shipping and it was not until after 1881 that the tonnage of 1860 was permanently surpassed. Thereafter a fairly steady growth appears, continuing up to 1913 when the figure reached 6,850,000 gross tons. The first World War caused a small drop, owing to the transfer of ships to the foreign trade, but subsequently this was more than made up by the return of these ships and the growing traffic, particularly that through the Panama Canal; since 1930 over 10,000,000 gross tons belonged in this group.

This growth of shipping engaged in coastwise, Great Lakes, and river traffic was solely a product of the expansion of domestic water-borne trade. Under our navigation laws foreign ships were excluded from this trade. This regulation provided absolute protection to domestic shipping,

so that growth was entirely dependent upon the expansion of domestic trade and the success with which the waterways were able to compete with the railroads or other transportation facilities. The greatest success was attained on the Great Lakes, chiefly in the carrying of iron ore from the Lake Superior district, a traffic which grew very rapidly especially after the middle eighties. As a result the lakes tonnage rose from less than one-sixth of the total domestic tonnage in 1860 to more than two-fifths of the total in 1913; since then it has declined to about one-sixth owing to the expansion of the coastwise trade. As the tonnage employed in the Western river traffic has declined to an insignificant figure, practically all of the remaining growth is found in the coastwise trade. Here the increase has been very rapid in recent years, a growth due in part to the opening of the Panama Canal and in part to the growing volume of traffic between various coastal ports.

The history of the registered tonnage engaged in foreign trade was marked by much greater changes and vicissitudes. Beginning with over 2,500,000 gross tons in 1860, the Civil War period brought losses through capture, destruction, or transfer to foreign flags which reduced this fleet to 1,600,000 tons in 1865. Most of this loss was due to transfer to a foreign flag to escape capture and in 1866 Congress passed a law denying such vessels the right to reregister under the American flag. From then on minor fluctuations occurred until 1878, when the total remained substantially the same; there followed a fairly steady decline to a low point of 737,000 tons in 1898, succeeded by a moderate recovery to 1914 when the figure stood at 1,076,000 tons. The urgent need for shipping after the outbreak of the first World War, particularly after the United States entered the struggle, led to an enormous expansion and by 1921 over 11,000,000 tons was on the registered list. The renewal of keen foreign competition following the return of peace and, subsequently, the decline in traffic reduced the figure to around 4,000,000 tons in recent years.

The decline in this branch of our merchant marine up to 1898 combined with the expansion of our ocean-borne foreign trade resulted in a very marked decrease in the proportion of that trade carried in American ships. Although this decline had started after the decade of the 1820's, we still carried in 1860 about two-thirds of the value of our foreign trade. After the Civil War this proportion was nearly cut in half and, following a slight temporary gain, the downward trend was resumed until the quarter century preceding 1914 during which the proportion fluctuated around 10 per cent. In the year preceding the outbreak of the first World War, American ships carried only 9 per cent of the value of our foreign trade; British ships carried 53 per cent and German 14 per cent. This heavy dependence upon foreign shipping, much of which ceased to be available after the outbreak of war, created a serious situation and led to efforts

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to increase the supply of American shipping, especially after the United States entered the war.

As a result of the enormous additions thus made, the proportion of the foreign trade carried in American ships steadily increased until in 1920 it reached 43 per cent of the total, the highest point since the Civil War. But with the severe competition that followed as a result of the over-supply of shipping the proportion has since fluctuated around 35 per cent. A similar trend is indicated in the percentage of the total tonnage entering and clearing American ports in the foreign trade that was made

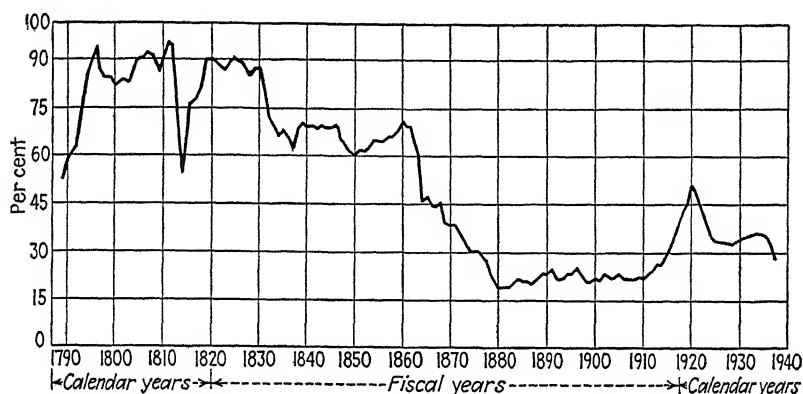


FIG. 59.—Percentage of American tonnage in total tonnage of vessels entering and clearing from United States ports in the foreign trade since 1789.

up of United States ships, as shown in the chart just above. The fact that this percentage generally fluctuated somewhat above the percentage of value carried suggests that foreign shipping got the bulk of the most valuable cargo, or sailed in ballast less often.

The factors responsible for the fluctuations in this branch of our merchant marine were numerous and somewhat complicated, but they were connected chiefly with our navigation laws, and in order to obtain an understanding of the main developments we now turn to a consideration of that legislation.

The Navigation Laws. In the period following the Civil War the general policy of reciprocity underlying our navigation laws, which had been adopted after the War of 1812, was continued. Although the coast-wise trade was still reserved exclusively for American ships, in the foreign trade foreign ships were admitted on the same terms as American ships, provided the country whose flag they flew did not discriminate against American ships entering its ports. After 1849, when England abolished the last discrimination in the indirect trade, this reciprocal arrangement applied to every country of any importance in the carrying trade so that

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American ships faced world competition on the basis of efficiency. It was soon found, however, that our navigation laws involved certain requirements that placed American ships engaged in the foreign trade at a relative disadvantage as compared with foreign ships.

In the first place, only American-built ships were permitted to register under the American flag, a provision adopted in 1789 and continued substantially unchanged down to 1912. As long as the cost of building ships in this country was below, or at least did not greatly exceed, the cost of ships built elsewhere, this was not a serious handicap, especially as Americans showed superior efficiency in the handling of modern sailing ships. But when iron and steel steamships were introduced, the United States found itself at a great disadvantage in the cost of their construction as compared with England. Nautical engineering as well as the iron and steel industry was more advanced in England; wages were lower, and the labor cost was an important item—often from a third to a half the total—in ship construction. Then, as the volume of her steamship construction increased and attained a figure far greater than that of the United States, England secured certain additional advantages through large-scale production and standardization. Toward the close of the century other rivals in steel shipbuilding appeared in Germany and then in Japan, and throughout the period the Scandinavian countries were active in the construction of wooden or steel ships.

A law of 1872, under which certain materials used in the construction of wooden ships engaged in the foreign trade were admitted free of duty, was extended in 1890 to certain materials used in ships built of iron or steel but proved of no real advantage. Although improvements in the steel industry of the United States had greatly decreased the cost of steel by the end of the century, the other disadvantages still continued and American-built ships remained relatively costly. This situation placed the American shipowner at a distinct disadvantage when he engaged in carrying trade where he faced the competition of cheaper foreign-built shipping. Moreover, the American advantage enjoyed through greater efficiency in the handling of wooden sailing vessels does not appear to have continued in the operation of steel steamships.

This was not the only disadvantage that our navigation laws imposed on our merchant marine. They established certain requirements that tended to increase the cost of operating American ships. Most of the officers of the ship had to be Americans and the higher wage level that prevailed in the United States increased this item of expense. The ordinary seaman hired in American ports also received a relatively high wage. Furthermore, the laws established requirements as to food, quarters, and various other things that increased the cost of operation relative to ships sailing under foreign flags.

The loss of shipping after 1860 led to a second resort to ship subsidies during the years 1864-1877. These were granted to only a few steamship lines engaged in carrying the mail, chiefly to lines running to the West Indies, South America, and Asia. About \$6,500,000 was given in subsidies during this period, of which the Pacific Mail received over two-thirds. The effect upon cargo-carrying shipping was slight. When it was discovered that one company had spent a large sum in bribery in an effort to secure an increased subsidy from Congress, the reaction was so great that all subsidies were stopped. The third resort to subsidies is marked by the passage of the Postal Aid law in 1891. This also was confined to lines carrying mail, the amount of the subsidy ranging from \$0.67 to \$4 per mile outwardbound, depending on the quality of the service. Very few lines operated under this law for any length of time as the additional requirements and the mode of payment, which did not provide an advance for an increased quantity of mail, generally tended to offset any advantage. After 1900 renewed efforts were made to secure a more general form of subsidy but Congress refused to act, partly because of conflicting sectional interests and partly because it was feared the public would regard such legislation as a form of favoritism.

The chief explanation for the decline of our merchant marine engaged in the foreign carrying trade during the last half of the nineteenth century is thus to be found in the changed conditions of shipbuilding and in the provisions of our navigation laws, which tended to place both American shipbuilders and shipowners at a disadvantage as compared with those of foreign countries. Combined with the greater opportunities available in other fields of economic activity there was little inducement for American capital to enter this field. Nonetheless some capital did seek employment there. But it is a fact significant of the discouraging influence of our navigation laws that, even when American capital was invested in this field, the ships were often operated under foreign flags. From the close of the nineteenth century on to 1914 at least, there was at times considerable shipping engaged in foreign trade and owned by American corporations or capital but sailing under foreign flags. Additional evidence as to the effect of the laws is provided by the fact that, when the Panama Canal Act of 1912 made a partial break in our traditional policy by admitting foreign-built ships to American registry provided they were not over five years old, nobody seemed inclined, until after the war had broken out, to take advantage of it since it involved greater operating expenses.

Shipping Legislation since 1914. The outbreak of the first World War brought home to the country the difficulties incident to the heavy dependence on foreign shipping that might arise in such an emergency. Fortunately, Great Britain, possessing nearly half the world's shipping and customarily carrying over half of our ocean-borne trade, was soon

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able to gain substantial control over the seas. But a considerable portion of her shipping had to be diverted to other purposes and this, combined with the disappearance of the German merchant fleet and the abnormal demand for cargo space created by the war, soon led to a serious shortage, and cargo rates mounted by leaps and bounds.

The first relief measure passed by Congress was the Ship Registry Act of August, 1914, under which foreign-built ships over five years old were admitted to American registry and the President was authorized to suspend temporarily certain requirements of our navigation laws so as to facilitate such transfer. In the two years following something over 400,000 tons of shipping was transferred, nearly all consisting of vessels already controlled by American capital, but England then prohibited further transfer of her ships. In September, 1914, when it was found that private marine-insurance companies were unprepared to accept all the marine risks incident to war, the War Risk Insurance Act was passed under which the government stepped into the breach and continued to meet this need throughout the war with marked success. Though passed in 1915, the Seamen's Act was not a war measure but had as its objectives provisions for greater safety and more favorable conditions for the crew. Since these increased operating costs, it was urged that it would put American ships at a still greater disadvantage.

The Ship Purchase Act of September, 1916, in addition to creating the Shipping Board with the regulatory powers previously described, was also designed to provide for an immediate increase in the merchant marine. The board, besides being granted the power to lease, purchase, and operate ships, was authorized to organize a corporation to build ships. Vigorous action was delayed until the entrance of the United States into the war was imminent, but in March, 1917, the United States Emergency Fleet Corporation was organized with a capital of \$50 million provided by the government. By this time the shipping situation had become most acute. German submarines were destroying shipping faster than it was being built and the growing scarcity seriously interfered with the movement of allied troops and supplies, to say nothing of the growing difficulty in getting adequate food supplies to Great Britain. Moreover, it was obvious that if the United States was to exercise any appreciable influence in the fighting on the western front, it must have ships to carry troops and supplies across the ocean and speed was of the utmost importance. Shipping was the bottleneck through which American resources had to pass; without an adequate supply these resources were of little avail.

In consequence the country embarked upon a program of shipbuilding such as the world had never known. The difficulties met with and the results achieved will be described later in the chapters dealing with the war years. Since most of the construction started at this time was not

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finished until some time after the war was over, the all-time peak in the history of our merchant marine was not reached until 1922 when the total was nearly 18,500,000 gross tons. This was almost equal to that of the United Kingdom; France, which stood third in rank, had less than a quarter as much. Of this total the government owned 8,000,000 tons; its fleet of 2,300 vessels included nearly two-thirds of the tonnage suitable for deep-sea trade and represented an outlay of nearly \$3 billion. With this white elephant on its hands the government for years to come faced a world market completely demoralized by the efforts of various nations to increase their merchant marine despite the existing surplus of shipping.

The first postwar legislation to meet the problem was the hastily drawn Jones Act of 1920 designed to maintain the fleet obtained at so much cost but to get the government out of the business of owning and operating ships as quickly as was practicable. To encourage private operation, shipowners were relieved of certain taxes and offered financial aid in the purchase of ships. Other provisions of the law designed to discriminate against foreign shipping could not be put into effect. The task of selling the government-owned vessels proved a difficult one, despite the easy terms offered, and dragged on for years till in 1938 it was announced that the hundred odd still remaining would be removed from the market. In this way the government recovered about 10 per cent of its original outlay. Some continued to be operated by the government or for its account, often at a loss, and a large number remained idle while growing obsolete. Though the low and easy terms of payment enabled some buyers to operate on a shoestring and helped to overcome temporarily the usual disadvantage of high-cost ships, it became evident that shipping engaged in the foreign trade was not only decreasing in amount but also deteriorating and few new vessels were being built for this trade.

In the endeavor to provide greater assistance the Merchant Marine Act of 1928 granted a large increase in the subsidy contracts for carrying mail. Up to this date the total of such subsidies paid under the act of 1891 had been about \$31 million; under this new law, until such contracts were terminated in 1937, some \$176 million was paid out. This stimulus, supplemented by an increase in the revolving loan fund for construction to \$250 million, gave only a momentary spurt to shipbuilding before the depression set in and served to add one more chapter to the unsavory history of ship subsidy scandals. The other results were so unsatisfactory that the President declared the law a failure.

The justification for this declaration was disclosed, not only by an investigation of the abuses that had developed under the law, but also by a 1937 report that showed the state of deterioration into which the shipping engaged in the foreign trade was rapidly falling. This report indicated that, although the American merchant marine was second in

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volume among the chief carrying nations, it ranked fourth in speed and last in age. More than a quarter of the registered tonnage was already over 20 years old and practically obsolete, and by 1942 seven-eighths of it would be in this condition. During the preceding decade out of nearly 9 million gross tons of new world construction only 5 per cent had been registered in the United States. In short the country had been "living off the fat" of its war-built fleet while the shipping of other nations was being increased as well as greatly improved. Another difficulty faced was the bad labor situation for which both employers and employees were held to blame. Wages and working conditions were poor, strikes and friction between rival unions constantly tied up ships, and proper discipline was lacking.

In an effort to meet these problems, the Merchant Marine Act of 1936 and its subsequent amendments were passed and a radical change in subsidy methods was adopted. Under this law the system of subsidy mail contracts was abandoned, and in its place three forms of subsidy were provided. The first, designed to offset the high cost of American-built ships, authorizes the government, in the case of ships to be built in the United States according to approved plans and to be employed in a needed foreign shipping service, to pay up to one-third and, under certain conditions, up to one-half of the cost of the ship where there is that much excess over what it would cost if built abroad. Such ships are to be built on government contract and then sold to the shipowner at cost less the differential subsidy on very easy terms of long-time payment, so the shipowner also gets much of his capital at a low cost. The second form of subsidy is granted to vessels (practically only to those of American build) operating in essential foreign trade routes and is to be sufficient to offset the higher operating costs as compared with those of foreign competitors. The third form provides for an additional grant, if necessary, to offset the effects of governmental aid paid to foreign competitors.

It should be noted that in practical operation this subsidy system reverts to the policy of excluding foreign-built ships from any branch of the merchant marine. The administration of this law, upon which much will depend, is vested in the newly created United States Maritime Commission, which succeeds also to the functions of the former Shipping Board. In case the subsidies do not succeed in maintaining under private ownership the quantity and character of shipping deemed desirable for purposes of national defense and foreign trade, government ownership and operation are authorized. The commission is also authorized to establish minimum crews, wages, and working conditions on subsidized vessels, and all the officers and (except 10 per cent in the case of passenger vessels) the crew must be Americans. Subsequently the Maritime Labor Board was created to provide for mediation in labor disputes.

The Maritime Commission has estimated that in a war with a major power at least 1,000 merchant ships totaling 6 million gross tons would be required for purposes of national defense. Although this amount is available, it is rapidly becoming obsolete and the first plans of the commission contemplated the construction of 50 ships a year for the next ten years, though subsequent study led to the conclusion that this was impracticable. In the early estimates the total annual outlay for subsidies under the new law was figured at between \$25 million and \$30 million. By the opening of 1939 contracts had been let for the construction of 52 vessels and 13 companies representing over 1 million tons of shipping were receiving operating subsidies; this constituted about half of the total engaged in the dry cargo and passenger foreign carrying trade. But the question whether the objectives of the law could be attained under private ownership supported by the existing subsidies remained unsettled. A few ships are still operated by the government and others owned by the government are leased to private operators. Many American shipowners, chiefly those carrying their own cargo such as oil or bananas, still find it advantageous to register their vessels under a foreign flag.

The Merchant Marine Problem. It is obvious, in view of the history of our merchant marine since 1860, that under existing economic conditions and legislation it is going to be extremely difficult to maintain that branch of our shipping which is engaged in the foreign trade in competition with the shipping of other nations. Since the high peak was reached in 1922, there has been a steady decline; what the recent legislation will accomplish is uncertain. If the country desires to maintain through its navigation laws a high-cost shipbuilding industry and a standard of living and operation that involves greater expense than that which prevails on foreign ships, we cannot expect to meet this competition successfully on a basis of reciprocity in treatment.

There are two obvious methods for meeting the difficulty. One would be to permit the purchase of foreign-built ships and reduce our standards so that, as far as legislation is a factor, the outlay for ships and the operating costs will be more nearly on a level with those of our chief competitors. This would greatly aid, but whether it would be sufficient only experience could determine. A second method would be to maintain our higher standards and provide some form of general subsidy sufficient to offset the higher costs involved. This is the method adopted in 1936.

Another possibility is, in place of direct subsidies, to abandon the policy of reciprocity and return to the early policy of discrimination against foreign shipping, particularly in the form of tonnage and tariff duties. Just what this would accomplish is dubious; undoubtedly it would result in retaliation by foreign countries and would involve a

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greater cost to shippers and tend to check foreign trade, and consumers would foot a portion of the bill.

In view of these difficulties that face the country if we seek to maintain a large merchant marine, the question is raised why we should attempt to do so. The strongest argument in favor of such action is essentially noneconomic in character: a large merchant marine may be vital in time of war both to act as an auxiliary to the navy and to carry on foreign trade. The first World War illustrated this situation and the attempt to supply the need was enormously costly. Moreover, it is obvious that, should the age-long tendency toward more nearly world-wide specialization of production be renewed, despite the reverse trend of today, our dependence upon foreign trade will increase in importance, and we cannot be certain that in case of war any foreign shipping upon which we had become dependent would be available as neutral.

To the reply that it would be cheaper to maintain an adequate navy it may be retorted that, whereas an adequate navy is essential, it is of little use so far as foreign trade is concerned if there is no merchant fleet to protect, and such a fleet cannot be built instantly. Experience has shown that the essential thing is to have adequate shipping available at the opening of war if the big shipping nations are involved, for it cannot be built in time to be of any use unless the war is greatly prolonged. The situation developing in 1940 was only repeating the experience in the early years of the first World War.

Among the economic reasons advanced for having a large merchant marine the one most stressed is that it will develop foreign trade. It is frequently assumed that there is something peculiarly advantageous in foreign trade as compared with domestic trade. It is asserted that "trade will follow the flag"; in other words, if ships sail to foreign ports they will develop trade there. The importance of this argument has been grossly exaggerated. It would be much more nearly accurate to say that the "flag follows trade"; that is, that ships will go wherever trade creates a sufficient demand for their service. The existence and the course of trade depend fundamentally upon the underlying economic conditions causing differences in relative costs of production, though limited by transportation costs, tariff barriers, etc.

On the other hand it must be admitted that there are some combinations of circumstances under which the existence of adequate and speedy shipping facilities between a foreign country and the United States might be enough of a factor to throw the balance in favor of placing an order for goods in our country rather than elsewhere. But it is obvious that such combinations of circumstances can apply only to a very small portion of the world's trade.

CHAPTER XXXVIII

MARKETING AND TRADE, DOMESTIC AND FOREIGN, SINCE 1860.—(*Continued*)

The Growth of Foreign Trade. The expansion of the export and import trade of the country during this period is indicated by the two charts on page 796, covering the period down to 1914 and since that date. To judge of changes in the physical volume, allowances must be made for changes in the general price level. Measured by value it will be seen that our foreign trade grew steadily up to about 1898; a more rapid expansion followed up to 1914; during the war it reached abnormal heights; after the subsequent reaction it still remained at a distinctly higher level than before the war. Throughout the period until the postwar years the value of the export trade tended to rise more rapidly than that of the import trade. This resulted in the shift from an unfavorable to a favorable trade balance about 1874 and a continued growth in this favorable balance thereafter till an abnormal peak was reached during the war.

It is evident that this expansion in the foreign trade reflected a growing importance of this activity in the economic life of the country, particularly as compared with the period from 1815 to 1845. No very satisfactory statistical measure of its importance is available but per capita figures for different periods are suggestive of the change taking place. (See the chart on page 439.) Between 1820 and 1845 the per capita value of exports had fluctuated around \$6 or \$7; imports were only a trifle greater in amount. A slight gain followed, which brought the figures to \$10.61 and \$11.25 respectively for 1860. During the 30-year period beginning in 1870, imports averaged \$11.52 and exports \$13.15 per capita. Though the price level was falling during these years the figures showed no marked trends away from these averages.

With the present century a distinct upward trend appears, exports rising to \$23.44 and imports to \$19.18 per capita in 1914. Allowing for an advance of about 50 per cent in the wholesale price level during these years, it is clear that a marked growth in the volume of foreign trade was taking place. It is interesting to note, however, that at this time, just before the disturbances caused by the war, our foreign trade measured on a per capita value basis was far below that of the leading industrial nations of western Europe. As compared with a total for the United States of less than \$43 per capita, that of France was estimated at \$54, of Ger-

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many at \$73 and of the United Kingdom at \$108. Obviously foreign trade was a far more important factor in the economic life of those nations than in that of the United States.

The expansion that followed the outbreak of the first World War was, of course, abnormal and reflected the combined influence of the rapid rise

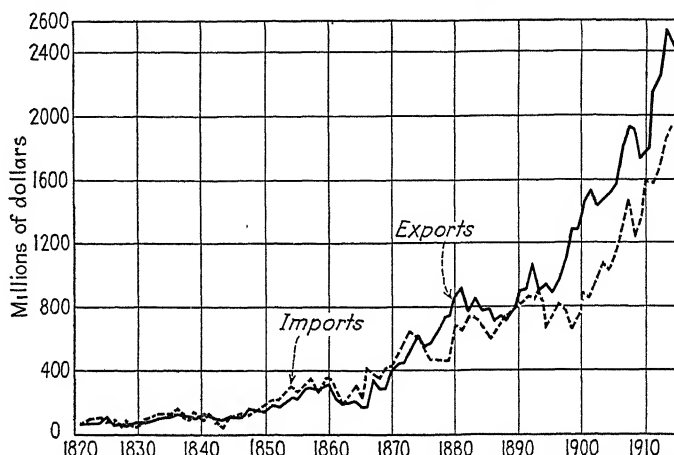


FIG. 60.—Annual merchandise exports and imports of the United States, 1821–1914.

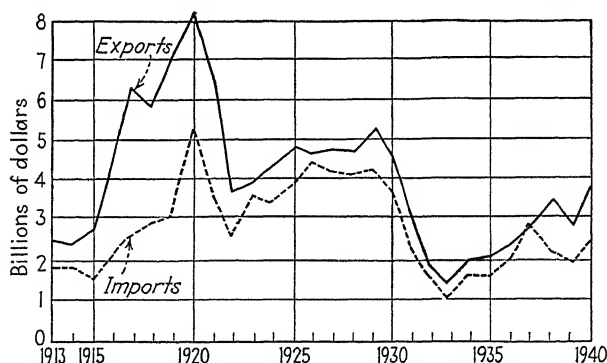


FIG. 61.—Annual merchandise exports and imports of the United States since 1913 (fiscal years).

in prices and the unusual demand for our exports. This culminated in the fiscal year 1920 when the total foreign trade of the country reached \$122 per capita of which nearly \$75 represented exports. As the wholesale price level was then about 120 per cent above the 1913 level, it is clear that the higher price level explains most of the rise. The decline in prices that followed brought a considerable drop in the value of our foreign trade so that during 1923–1925 the total averaged about \$70 per capita. With the decline in both volume and prices it fell to around \$25 during the subsequent depression but has since recovered most of this loss. If we com-

pare this figure with the average of about \$18 for the decade ending in 1860, after correcting for a higher price level, we may conclude that our foreign trade nowadays is something like twice as important per capita as it was just before the outbreak of the Civil War. It is estimated that during the period from the opening of this century down to 1930 the country commonly shipped out about 10 per cent of the exportable goods that it produced.

In this growth of foreign trade the part played by the government was a very minor one. In fact, the most important governmental action taken in the matter—that arising out of the tariff policy adopted—tended to restrict the growth of foreign trade. The reaction of the trend toward higher and higher protective duties in the United States was supplemented by the similar trend that came to prevail in many other countries. The commercial treaties and trade agreements negotiated through the State Department have been advantageous in helping to lower these barriers. Owing to the common tendency to assume that exports are generally more important for a nation's economic welfare than imports, such government aid as was provided usually sought to stimulate the former rather than the latter. Since the creation of the Department of Commerce and Labor in 1903 and the separate Department of Commerce in 1912, much more has been done in the way of gathering and publishing information of value to both exporters and importers, and the work of the greatly improved consular service, particularly that of the commercial attachés, has proved very useful. The Export Combination Act of 1918 was of especial aid to smaller exporters in reducing their costs. The maintenance of shipping lines through subsidies was of much less importance than commonly believed.

Commodities Entering into Foreign Trade. Such changes as occurred in the commodities entering into foreign trade were fundamentally due to all the conditions shaping the course of economic development both in this country and elsewhere, more particularly as these conditions reacted upon the relative costs of production of such goods as entered into foreign trade. Minor factors in the situation were, on the one hand, the artificial barriers such as tariff duties or other restrictions that tended to hamper trade and, on the other hand, all the improvements in transportation, communication, and the whole marketing organization tending to widen the market and thus to increase the number of commodities entering into foreign trade. Consequently the history of our foreign trade during this period reflects chiefly the expansion of agriculture and the great growth of manufacturing in the United States on one side and the industrialization of Europe and the opening up of the resources of other continents on the other side. In what follows, the temporary dislocations arising from the outbreak of war in 1939 are not taken into account.

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The changes that took place in the relative importance of the main classes of exported commodities are shown in the chart on this page. The outstanding features are the rise of manufactured and semimanufactured goods from 26 per cent of the total value of all exports in 1860 to over 60 per cent in the 1930's and the corresponding decline in the importance of exported crude products. Finished manufactures, other than foodstuffs, constituted quite regularly about one-sixth of the total up to

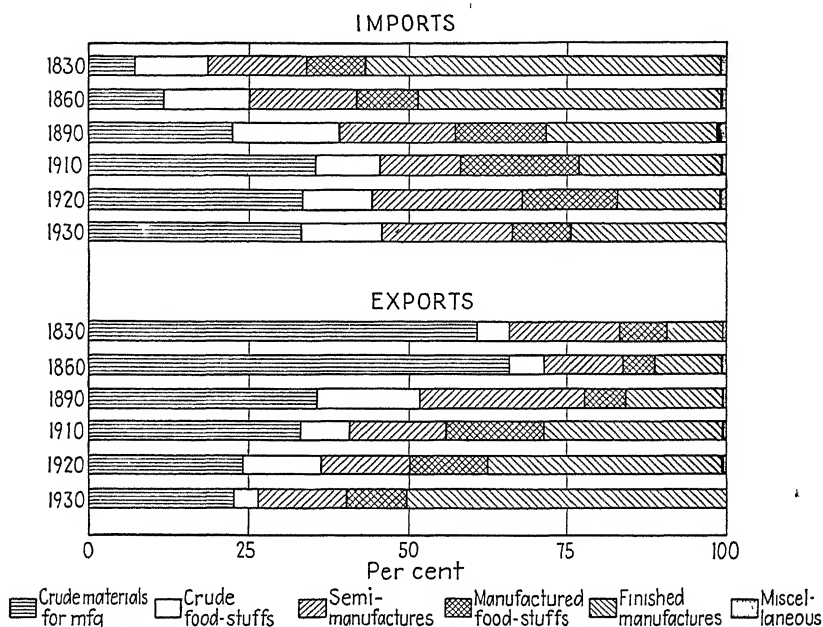


FIG. 62.—Percentage distribution of imports and exports of merchandise by economic classes since 1830.

1894, but thereafter increased rapidly; today, as nearly one-half of the total, they make up the largest class in our exports. Crude materials, other than foodstuffs, which made up around two-thirds of the total before 1860, fell to around one-third after 1895 and today make up between a quarter and a third of the total. The exports of foodstuffs in either crude or manufactured form typically made up less than a fifth of the total before 1860 but afterwards increased in importance very rapidly; the high point, half the total, was attained in the late seventies. There ensued a moderate decline to about 1900 soon after which the proportion fell to about one-quarter of the total and during the past decade has fluctuated around a tenth.

If we turn to individual commodities among the exports, we find that raw cotton is still far in the lead, though its relative importance is nothing

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like what it was in 1860. It has fallen from nearly two-thirds of the total exports at that time to somewhat less than one-fifth at present. This decline in importance is due, until recently, to the more rapid rise of other exports, for absolutely there was a great growth in the exports of cotton up to 1930. The quantity in the years before the depression, though less than before the first World War, was about 150 per cent above that in 1860, while the value was around four times greater. Still, the proportion of the crop exported has shown a decided drop; from over four-fifths of the total just before the Civil War, it fell to two-thirds of the total between 1870 and 1900; after the war it dropped to one-half of the domestic production; of late it is somewhat lower. Since various dangers attend a country whose exports are so largely made up of one commodity as was our case in the days when cotton was "king," the decline in its relative importance as an export may be considered a distinct gain, in so far as it promotes greater stability of exports.

Next in importance to cotton during most of this period were the exports of meat and meat products. These increased rapidly during the seventies; then the value rose more slowly up to 1906 after which there was a slight decline until the first World War. Since the war, especially since 1930, there has been a drastic decline in their importance. Lard, hams, and bacon are by far the most important items in this group. The value of the exports of wheat and wheat flour during this period fluctuated around that of the exports of meat and meat products, commonly somewhat above the latter up to 1885 and from then until after the war somewhat below. Since 1930 there has been a great shrinkage, but previously between a fifth and a third of the domestic crop was exported. The exports of leaf tobacco have steadily mounted and today are almost three times the quantity sent out about 1860 while their value is around \$125 million. There are no other single commodities of outstanding importance among the exports of agricultural products except the group of fruits.

Among mineral products there are but three items of prominence, all of which were practically nonexistent in the export trade before 1860. The value of the exports of petroleum and its products steadily rose from nothing to over \$130 million before the war then grew rapidly and before the depression averaged nearly \$500 million a year, thus making this group the most important export after cotton at that date. The next important mineral product among the exports is refined copper. Very seldom rising above \$3 million in value in any year before 1890, the exports of this metal then mounted to \$140 million at the opening of the first World War and since 1920 have fluctuated about \$130 million. Since 1920 the exports of coal have also amounted to substantially the same figure. The remaining extractive industry making an important contribution to our exports is lumbering. In the years just before 1930

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the value of the exports of sawmill products first reached the \$100 million mark.

The important position among our exports attained by the more highly finished manufactured goods is largely a product of the rapid growth that started just before the close of the nineteenth century, though there had previously been a rather steady advance. Much the most important group in this class is made up of machinery of all kinds. Slowly rising from about \$7 million in 1865 to \$22 million in the early nineties, it enjoyed a very rapid growth in succeeding years and just before 1930 averaged nearly \$500 million a year, practically equal to petroleum in importance. Next in order in this class, though only important since 1914, come automobiles and their parts, averaging over \$400 million just before 1930. Manufactures of cotton, in the lead in this class in 1860, despite a steady rise to \$124 million before 1930, had lost in rank. The commodities mentioned above all averaged over \$100 million in the years just before 1930 and there is no other commodity or fairly homogeneous group that had attained this importance among our exports.

If we consider our exports as a whole, it will be seen that they are based largely upon the abundant natural resources of the country. No export of appreciable importance is based upon imported raw materials, though minor instances are to be found as in the case of refined sugar, flour made in part of Canadian spring wheat, automobile tires, and some silk manufactures. It will also be noted that the greater portion of the exports, though a declining one, consists of materials which, if not still in the raw state, cannot be classed as highly finished manufactures. Further it will be seen that such exports as may be grouped among more highly finished manufactures are ordinarily commodities where American ingenuity, machine methods, and efficient organization of large-scale production have been applied in working up some relatively abundant natural resource.

The fundamental explanation for these characteristics among our exports is of course to be found in the relative costs of the different factors of their production in this country and in the countries to which they are exported—in short the law of comparative costs. In colonial days, when the chief obstacles to the development of exports were the relatively high cost of labor and capital and the chief advantage was the cheapness of certain raw materials, the exports generally consisted of raw materials or those only slightly worked up. Today the chief disadvantage is the relatively high cost of labor, though in certain lines high wages are more than offset by high efficiency. Capital at present is as cheap if not cheaper in this country than elsewhere. Furthermore, the obstacle inherent in labor cost has been overcome in many cases by the wide substitution of labor-saving machinery, in the use of which the United States leads the world.

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Also, as machine methods have come in, the advantages arising from access to a large market have become much more important, since only thus are the economies of large-scale production inherent in machine methods to be obtained. Such a market the United States has come to possess in the large and wealthy population within its own borders where freedom of trade prevails. The advantage of cheap raw materials the country still enjoys, though this is much less marked than formerly, owing to the growing competition of other less developed regions.

In short, therefore, our export trade of today is chiefly based on cheap natural resources, abundant capital facilitating the use of machine methods, and access to large markets. Thus the changes in the commodities entering into the export trade are to be explained chiefly in terms of the changes taking place in the relative cost of the fundamental factors of production.

Imports. Turning to imports, we of course find the reverse situation, since the conditions favoring the export of certain classes of commodities lessen the likelihood of their being imported and tend to favor imports of the classes that do not enter extensively into the export trade. The chart on page 798 indicates the changes that occurred among the chief classes of imported commodities. The outstanding change is the growth in the relative importance of the imports of crude materials other than food-stuffs, which rose from a little over one-tenth of the value of all imports in 1860 to a level fluctuating around one-third of the total in the years since 1920. This group now constitutes much the most important single class of imports. The only other prominent change is the decline in the proportion of finished manufactures from nearly one-half the total in 1860 to a little more than one-fifth the total since 1920. Both of these changes obviously reflect the growth of manufacturing industries in our country during this period. The proportion of semimanufactured goods showed a slight tendency to increase and recently has constituted something more than a fifth of the total; the proportion of crude foodstuffs shows little change, generally making up about one-seventh of the total.

Among individual commodities or fairly homogeneous groups of those imported, raw sugar was until after the war the most important measured in terms of value; since then it has lost first place, the average for the five years 1926-1930 being over \$200 million or nearly seven times what it was in 1860. In the years since 1920 the imports of raw silk have averaged much higher than those of sugar, amounting to \$370 million just before 1930, though in 1860 they were negligible and it is only within the last quarter century that they rose above \$32 million. This is a product of the rapid growth of the silk manufacture since the Civil War. Not far below the imports of sugar in value during most of this period and finally surpassing them with an average of \$280 million in 1926-1930

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were the imports of coffee. Another raw material which has become important only in recent years is rubber, the imports of which rose to a level just above coffee in 1926-1930. The only other raw products among the imports which averaged as much as \$100 million in value just before the depression were hides and skins, furs, mineral oil, and copper ore; not far below were wood pulp, tin, vegetable oils, wool, and burlap.

Among imports of finished manufactures paper is the only instance where the value averaged as much as \$100 million a year at this time. It is only since the first World War that this import and that of wood pulp became important and this growth is significant as illustrating the effects of the depletion of our natural resources and the consequent shift of the manufacture to Canada. Next in importance among manufactured imports at this time came those of wool and of cotton, each worth about \$65 million. It may be noted that the imports of iron and steel and manufactures thereof had lost their former importance after the close of the last century.

A consideration of the nature of the leading imports shows certain outstanding characteristics. The largest imports consist of raw materials or foodstuffs which this country does not produce in any quantity since they are chiefly found in semitropical or tropical regions. A few raw materials in the list include products that are grown in this country but the imports are of a different quality from most of the domestic product, such as Turkish and Cuban tobacco, long-staple Egyptian cotton, coarse carpet wool, and long-staple combing wool. A smaller group including mineral oil and copper, though similar to the domestic products, are imported chiefly to be refined or further worked up and then, in part at least, reexported.

In the case of the imports of finished manufactures a more detailed study would show that, generally speaking, they are highly finished products which have required a considerable amount of labor, often of skilled character, to produce. Thus the imports of textile goods or manufactures of iron and steel consist chiefly of the finest grades of cloth and the most highly finished steel products; our exports in these lines are made up of less highly finished goods in the production of which less labor and more machinery are employed. A smaller group among the imports of finished manufactures is made up of products the raw materials for which are not found in this country or only in insufficient quantities and which for various reasons are manufactured abroad. To summarize we may say that the chief explanation for our leading imports is to be found in the lack of certain raw materials and in the high labor cost where it is an important element in the total cost of production.

The Course of Foreign Trade. The changes in the relative importance of our export and import trade with different continents during this

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period are shown by the chart¹ below. For our exports, Europe is by far the best customer. Her proportion rose from three-fourths of the total in 1860 to five-sixths about 1880 but then declined to less than two-thirds just before the first World War; since 1925 it has amounted to somewhat less than half the total. Next in importance come the exports to the rest of North America, now amounting to a quarter of the total as compared

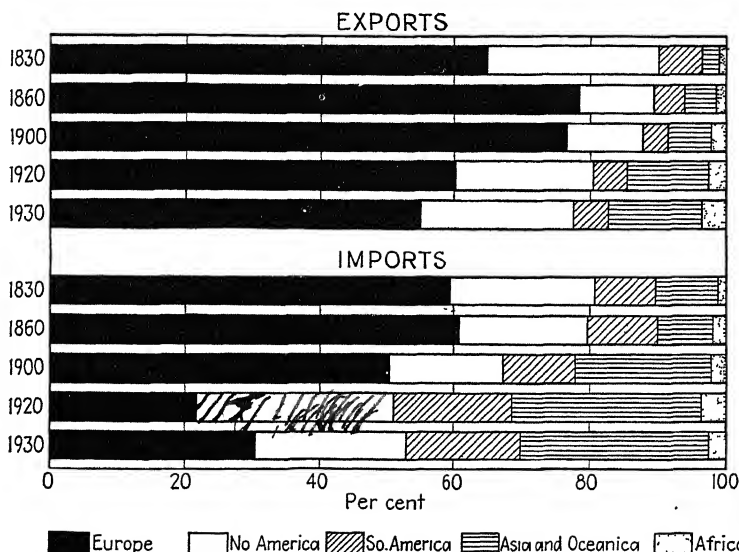


FIG. 63.—Percentage of total exports to and imports from each continent since 1830.

with a sixth in 1860. Asia stands third with over a sixth of the total, but the exports to that continent show a greater relative growth than any other group during the period, for in 1860 they made up a very slight fraction of the total. In spite of all the talk about our export trade with South America, it amounts to only around 8 per cent of the total; in 1860 it was nearly 5 per cent. Oceania with barely 3 per cent and Africa with a little more still remain unimportant. Thus the outstanding changes occurring during the period are the decline in the importance of the exports to Europe and the growth of those to Asia and the rest of North America.

In our import trade the predominance of Europe is less marked. Although that continent sent us three-fifths of the total in 1860, the proportion fell to about one-half after the Civil War; since the first World War it has fallen to less than one-third of the total. Next in order comes the rest of North America supplying us at present with over a

¹ It should be noted that not all imports originated in the country from which they were shipped to the United States; in the case of exports the country to which they are shipped is not necessarily their final destination.

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quarter of our imports as compared with a fifth in 1860. Since 1924 Asia has risen to the point where it provides almost as much and sometimes more than Europe and, as in the case of the export trade, shows the greatest gain of any continent as compared with 1860 when she supplied barely 7 per cent of our imports. South America at present furnishes one-eighth of our imports as contrasted with a tenth in 1860. The proportion of imports from Oceania and Africa still remains insignificant.

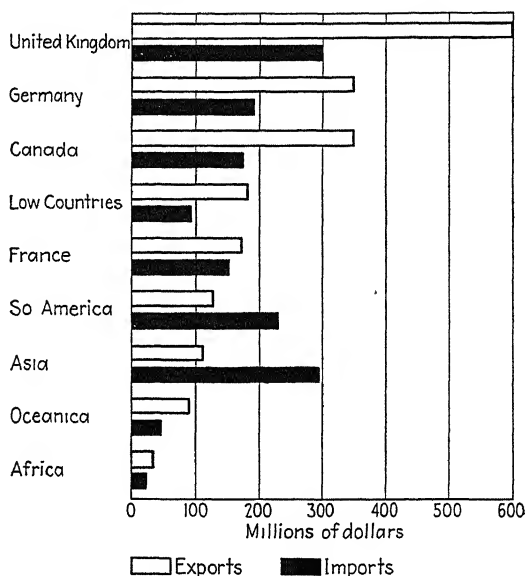


FIG. 64.—Imports from and exports to chief countries or continents, 1914.

A somewhat more detailed view of the direction followed by our foreign trade, with the relative importance of the chief countries with which we traded just before the opening of the first World War, is given in the above chart. The United Kingdom then still stood in the lead among the nations as regards both exports and imports. At this date Germany ranked second in importance and Canada was a close third. No other countries stood in the same class, but France may be noted as coming next in order. Among the remaining countries the Netherlands was the only one taking at least \$100 million worth of our exports at this period, a considerable portion of which was doubtless reexported. In supplying imports the United Kingdom, Germany, Canada, France, Cuba, the British East Indies, Japan, and Brazil led in order. The chart shows the insignificance of the trade with Oceania and Africa as well as the fact that at this time the total trade with any one of the three countries which stood in the lead considerably exceeded the total trade with all of Asia or all of South America. Also it may be noted that there was no

European country of any importance, and only a few minor ones, where the balance of trade was not favorable to the United States. The Canadian trade also showed a favorable balance as did the meager trade with Africa and Oceania. In the remainder of North America and in Asia and South America the balance was decidedly unfavorable to this country, though the trade with a few individual nations showed one that was favorable.

Although the situation in recent years, as affected by all the postwar developments down to the outbreak of war in 1939, shows a few significant changes as compared with the prewar years, the main features have not been greatly altered. The notable changes arise from the decline in the relative importance of the trade with Europe and the growth of that with Asia and the rest of North America, as already noted. In consequence our trade with Canada has risen to the point where it nearly equals, and has occasionally exceeded, that with the United Kingdom. The growth of trade with Japan has now given that country third position and, though its total value is considerably below that of the Canadian trade, it substantially exceeds that with either Germany or France which hold fourth and fifth places respectively. The balance of trade with the different countries and continents, though altered in amount, shows substantially no change in the side upon which it falls as compared with the prewar situation.

The relative importance of the various ports through which this foreign trade passed underwent appreciable changes during this period. These changes are to be explained mainly by alterations either in the volume of the foreign trade with different countries, by shifts in the location of production of commodities within the United States, or by developments in the available means of transportation. The figures for the average yearly value of commodity exports, 1931-1935, show that New York with one-third of the total was far ahead of any other port, whereas in 1860 it had only a quarter of the exports and was second in importance to New Orleans in this trade. The greatest growth was that of Galveston-Houston which now ranks second to New York in the export trade, though a very poor second, since the value of its exports is one-eighth of the total. The remarkable advance of this port is due chiefly to the westward movement in the cotton, wheat, and oil-producing regions together with the development of its railroad and pipe-line connections with these regions and its port facilities.

The decline in New Orleans from first place in 1860 to third place today, together with the much greater decline in the importance of the southern ports of Mobile, Charleston, and Savannah, is chiefly to be explained by the great decrease in the relative importance of the exports of cotton since 1860, along with the westward shift of cotton growing.

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New Orleans also suffered from the diversion by the railroads either to the East or to Galveston of produce previously brought down the Mississippi. Outside of oil no other export of importance was developed in the South. The growth of the export trade to Canada augmented by shipments to other countries by way of the St. Lawrence River raised the ports on the Great Lakes to a more prominent position in the export trade so that today the customs district of Michigan holds fourth place, that of Buffalo sixth, and that of Chicago twelfth place. The growth of the West and of transpacific trade has raised the San Francisco district to fifth place today and the Puget Sound ports to eighth place.

In the rivalry among the North Atlantic ports the growing success of the railroads in competing with the water routes through the Erie Canal or the St. Lawrence River was an important factor in enabling such ports as Boston, Philadelphia, Baltimore, and the more recently developing Newport News to overcome the disadvantage under which they had previously suffered from lack of cheap transportation to the Middle West. Yet this apparently enabled Philadelphia and the Chesapeake Bay cities simply to retain about the same relative importance held before—seventh and ninth respectively. The customs district of Massachusetts declined to eleventh place. What New York lost in advantages through the decline of the traffic over the Erie Canal was made up by its railroad connections and its advantages in harbor facilities for larger ships.

In the case of the import trade the preeminent position of New York was even more marked than in that of the export trade, since approximately half of all imports were received at that port. Yet as compared with 1860, when it was receiving two-thirds of all imports, this was a relative decline. The chief factor in this outcome has been the rapid growth of imports at the Pacific Coast ports which has brought the Puget Sound ports up to ninth and San Francisco up to fifth place. The Boston district, though receiving less than one-ninth of the imports of New York, has just lost second place to Philadelphia and is followed by New Orleans. Considerably below these in amount of imports come the customs districts of San Francisco, Maryland, Buffalo, and Michigan in order.

The International Balance of Trade and Payments and the Movement of the Precious Metals. The rather complicated situation, arising from the changes in the balance of trade and in the other items in the balance of payments which finally determine the direction of flow of the precious metals, can best be explained for the period since 1860 by dividing these years into shorter periods each characterized by some important change in one or more of the main factors involved. These subdivisions can be summarized as follows: (1) 1850–1873, marked by an increased unfavor-

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able trade balance and a large outflow of specie, in contrast with the preceding period 1820–1849, when there was a moderate unfavorable trade balance but a net inflow of specie; (2) 1874–1895, marked by a permanent shift to a favorable trade balance of moderate amount and a decreased export of gold;¹ (3) 1896–1914, marked by a rise in the favorable balance of trade to an annual average of about \$500 million and a slight net inflow of gold; (4) 1915–1921, the period of the first World War and the subsequent reaction, marked by a rise in the favorable balance of

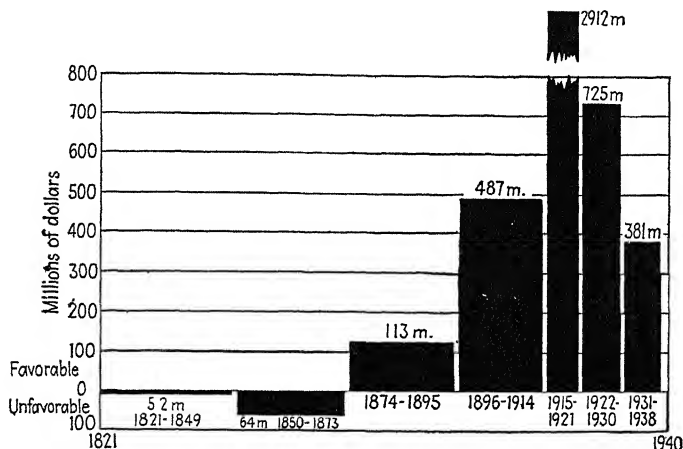


FIG. 65.—Balance of commodity trade 1821–1938. Annual average by periods.

trade to figures without parallel in all history and by an enormous net inflow of specie; (5) 1922 to date, marked by a declining favorable trade balance and a large net inflow of specie. Before making an analysis of the chief factors determining the shifts in the international flow of specie during each of these periods, it is desirable to explain the general movement in the balance of trade as this is commonly the dominating factor in the situation. (See the chart on page 796 as well as that above.)

In the history of the balance of trade of the United States, since adequate statistics were available beginning in 1821, the outstanding fact is that up to 1873 the yearly balance was nearly always unfavorable; since that date there have been but three years when it was not favorable. Between 1821 and 1850 the unfavorable balance was comparatively small and showed no distinct trend, but from then to 1872 there was a decided trend toward a larger unfavorable balance.

¹ From 1874 to 1933 silver is classified as a commodity and specie includes gold only. It was at this time that the general movement for the demonetization of silver commenced, following the decline in its value, and consequently outside of a few countries, notably China and India, gold became the final medium for settling the international balances of indebtedness.

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The shift to a favorable balance took place very suddenly and, during the period 1874-1895, there were considerable fluctuations in the balance; the annual average of the favorable balance was over \$100 million. After 1895 this suddenly advanced to nearly \$500 million about which point it fluctuated until the outbreak of the first World War. The abnormal demand for American goods arising out of the war continued until as late as 1921 and resulted in showing, for the seven-year period, an average annual balance in our favor of about \$3 billion. Thereafter this balance fluctuated around \$700 million until the depression, after which it averaged about \$260 million till 1938 when it again rose to over \$1 billion. Although the problem of explaining these fluctuations in the balance of trade is obviously one that can be answered only in a very general way, since any thorough analysis would involve a comparative study of production and marketing costs of innumerable commodities in many lands, still a brief statement of some of the main factors entering into the most prominent changes may be attempted.

The increasingly unfavorable balance after 1850 can be attributed first, to the effects of the output of gold from California which tended to raise the price level and to usher in a decade of marked prosperity such as is commonly characterized in this country by heavy imports. As the force of this factor weakened with the outflow of gold to other countries and the decline in its output, it was supplemented by the reactions arising out of the Civil War and the brief premature boom of the early seventies. But to explain the permanent shift from an unfavorable to a favorable trade balance which then occurred with such suddenness, both the more immediate and the deeper underlying changes must be considered.

Immediately, this sudden change can be attributed to the effects of the panic of 1873 and the long-drawn-out depression that followed. This resulted in a readjustment of the price level in the United States to a point more nearly in line with that in world markets thus stimulating exports and at the same time causing the reduction in imports which in this country has customarily accompanied a business depression. A closer correlation has always been found to exist between our imports and the fluctuations of the business cycle than exists in our export trade. This is due in part to the fact that imports are naturally more responsive to changes in domestic conditions than are exports and in part to the character of most of our imports, until recently semiluxury or luxury goods; our exports have until recently consisted in large measure of food-stuffs and raw materials. Another factor that momentarily increased the favorable balance in the latter seventies was a combination of large crops in the United States and a shortage in Europe.

While these temporary events help to explain why the shift occurred just when it did and why it was so marked, we shall have to look deeper

to learn why the favorable balance became enduring and progressively larger in amount. This involves an understanding of the whole trend in our economic development as it was related to that of the rest of the world but chiefly that of Europe.

The outstanding feature in the development of the United States that tended to swell the volume of exports was the very rapid growth in the output of agricultural produce, especially foodstuffs and cotton. The extension of the railroad system throughout the enormously rich agricultural region between the Appalachians and the Rocky Mountains between 1850 and 1885, combined with the rapid reduction in rail and transatlantic freight rates starting about 1870, provided cheap transportation to Europe. At the same time, beginning with the repeal of the English corn laws in 1846 and continuing till about 1880, there was a marked tendency to reduce or abolish customs duties among the leading industrial nations of Europe. Though there was a reaction toward protection among the Continental nations after 1880, its effects did not prevent an increase in the exports of American foodstuffs.

Finally, the competition from other newly developing countries which the great agricultural staples of the United States had to face in this European market, although growing, was not particularly keen up to the end of the century. The net result of all these factors was a large and steadily mounting volume of exports throughout the second half of the nineteenth century. Thereafter, however, except for the abnormal war years, there was a relatively slight increase in these exports and the subsequent growth in the favorable balance of trade has to be accounted for chiefly by the other outstanding trend in the country's development.

This is found in the rapid expansion of our manufacturing industries starting with the second half of the nineteenth century. Relatively the growth of manufacturing during the decade of the fifties was unusual; then came the Civil War with an added impetus. Further aided by the swift introduction of machinery, the growing domestic market, and the adoption of the policy of high protection, the manufacturing industries of the country have continued to expand with great rapidity ever since. This development was such that they supplied a steadily increasing proportion of the domestic market. Meanwhile, commencing about the first of the present century, the exports of manufactured goods began to grow at a very rapid rate and came to be much the largest group in the total volume of exports.

To summarize the net result of this growth of manufacturing as it tended to bring about the shift to a favorable balance of trade, it may be said that during the second half of the nineteenth century, while the exports of agricultural products were rapidly mounting, it tended to check any considerable growth in the imports of manufactured goods. In the

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twentieth century, when exports from agriculture failed to grow so rapidly and imports began to mount, the much greater rise in the exports of manufactured goods served to create an even more favorable balance of trade. It must, however, be added that this continued rise in the favorable balance of trade was contingent upon changes in other items in the total balance of indebtedness which made it possible for the rest of the world to pay for these exports. We can now turn to the more detailed analysis of these changes in the invisible items.¹

The Period from 1850 to 1914. Though the situation during the first decade of these years was briefly noted in Chap. XXIII, we can now summarize the facts for the period from 1850-1873 as a whole. During these years the unfavorable balance of trade amounted to a total of some \$1.54 billion. To this there was added, on the debit side of the balance, \$904 million estimated interest on the growing amount of foreign investments in the United States and \$576 million representing the expenses of American tourists abroad. Offsetting these debts, on the credit side of the account the chief item was an estimated net increase of \$1 billion in foreign investments, chiefly occurring after the war and largely consisting of the purchase of United States bonds and railroad securities, often bought at a heavy discount. The only other invisible item on the credit side was \$265 million representing the sale of ships, chiefly during the war, and freight charges of American shipping. Previously freight charges had been the most important item on the credit side of the balance, but the decline of American shipping in the foreign carrying trade, which begins with the Civil War, resulted thereafter in this being shifted to the debit side. Only because of the large earnings in the fifties was it possible to show a balance on the credit side for this period as a whole. It was to meet the deficit on the credit side as compared with the total of debit items that some \$1 billion net of specie, mostly gold, was shipped out of the country during these years.

At the beginning of the period 1874-1895 the balance of trade becomes favorable and so shifts to the credit side of the account. For the period it amounts to almost \$2.5 billion. The only other item on this side is the net growth of about \$1 billion in foreign investments in the country. On the debit side much the largest item is the interest charge on foreign investments estimated at \$1.87 billion, an amount considerably in excess of the net addition to foreign investments. The growing expenses of American tourists abroad had for this period risen to \$770 million. The decline in the American merchant marine engaged in the foreign carrying trade after the Civil War combined with the growing volume of foreign trade resulted in freight charges due to foreign ships exceeding those due

¹ For the periods down to 1914 the following figures are based upon the study of Bullock, Williams, and Tucker, *Review of Economic Statistics*, vol. I, p. 215.

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to American ships, so that the balance on this item amounting to \$560 million is now shifted from the credit to the debit side of the account. The remaining item of importance on the debit side is represented by the rapidly rising sum of immigrant remittances estimated at \$440 million. As the credit items fell somewhat short of those on the debit side, the difference was made up by exports of gold amounting to \$112 million.

A comparison of the position and amounts of the various items making up the balance of our international indebtedness during this period with the situation in the preceding period will prove most instructive. Two able economists, writing just at the close of the preceding period when both the unfavorable balance of trade and the interest charges on foreign investments had been rapidly rising, pointed out that such a condition could scarcely continue and that a shift to a favorable balance of trade would probably soon take place, exactly as did occur. This prediction was based on the economic principle that in some way or other the total of debit and credit items must be made to balance, although no one item on one side of the account can be said to be dependent upon any one item on the other side of it. It was clear that interest charges on the debit side could not go on rising together with an unfavorable trade balance—all the more so as the debit balances for freight charges, tourist expenses, and immigrant remittances were also rising—unless some counterbalancing item rose on the credit side. An increase in new foreign investments might help temporarily but in the long run this would also increase the interest charges on the debit side. Consequently a shift to a favorable balance of trade appeared to be the most likely way by which the problem of finding means to offset these growing debit items could be solved.

The period 1896–1914 was marked by a decided increase in the favorable balance of trade bringing the total for the period up to over \$9 billion; this was the outstanding development in our international trade balance at this time. The only important addition to this sum on the credit side of the account was a net increase of around \$1 billion in the foreign investments in the country. Offsetting these there was a marked growth in all the items that had appeared on the debit side of the account during the preceding period. Interest on foreign investments, tourists' expenses abroad, and immigrant remittances were much the largest items among this group and amounted to between \$2.8 billion and \$3.4 billion each. Freight charges advanced to \$640 million and other miscellaneous items to around \$570 million. In this period, however, they were not quite sufficient to offset the total on the credit side so that shipments of \$173 million of gold to this country had to be made to settle the balance.

The War Period from 1914 to 1921. The outbreak of the first World War, creating an abnormal demand for American goods coupled with the

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great rise in prices, resulted in raising the favorable balance of trade to a prodigious sum unparalleled in history. For the period from July 1, 1914, to the end of 1918 this amounted to a total of \$11.8 billion. Of course the problem of meeting the payments due the United States for such a staggering amount became a very serious one. In the years up to the entrance of the United States into the war the means used were distinctly different from those used subsequently.

Until April, 1917, the chief means employed by debtor countries to settle for payments due this country were borrowing in this country, re-sale to this country of American investments owned abroad and, finally, shipments of gold to the United States. The amount borrowed in this country, chiefly in the form of the sale of foreign government bonds, was probably nearly \$2.4 billion and the value of American securities repurchased was around \$2 billion. Other items, customarily on the debit side, also helped out, such as immigrant remittances and the balance due for foreign shipping services, though this latter item declined in importance as did also the balance due on foreign capital investments. The resulting net inflow of gold was \$1.1 billion, an amount the importance of which can best be judged by the fact that it represented an addition of more than one-half to our existing monetary stock of gold, to say nothing of the drain thus imposed on the other countries. (See the chart on page 978.)

The problem of how the debtor countries were to make payments for their rapidly growing purchases from the United States was quickly solved, for the time being at least, when this country entered the war. No longer limited in its actions by being in the position of a neutral, the government now practically took over this burden by lending to the Allies such sums as were needed for this as well as for some other purposes. The use of its great credit backed by the wealth of the country was one of the important resources that were thus made available to the Allies in time of sore need. This policy was continued to the end of the war, the total of the advances to the Allies up to that date amounting to over \$7.3 billion and still more was advanced later. On the part of the Allies, this obviated temporarily the necessity for borrowing from private sources in this country, reselling their American investments, or remitting more gold, all of which means practically ceased to be used for the remainder of the struggle.

Still another result was to make the United States for the first time a great creditor nation, since its loans and investments in foreign countries, public and private, now far exceeded foreign investments in this country. This meant that, from this time, the net balance of interest charges would be shifted from the debit to the credit side of our general balance of international indebtedness, a fact which would obviously make it increasingly difficult for the rest of the world to continue to purchase our

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exports in amounts far exceeding what we purchased of them in the form of imports.

After the return of peace in 1918, three years passed before the country's favorable trade balance had been reduced to what could be called a normal level. In 1919 in fact it actually rose to over \$4 billion, a record in all history. The two following years each brought successive reductions of about \$1 billion so that the average favorable balance for these three years was about the same as for the last three years of the war. This was made possible largely by new loans on the part of the government to foreign countries, augmented by loans or extensions of short-time credit from private sources. Even these, however, proved insufficient to offset our credit balance and the net inflow of gold for the three years (despite a large outflow when freedom of export was restored in 1919) amounted to almost \$500 million. Thus, one result of the war's effect upon the balance of international payments was a great shift in the distribution of the world's stock of monetary gold, giving the United States a disproportionate share of the total, chiefly at the expense of the warring European nations, and about doubling the amount of gold held in the country in 1914. This greatly added to the difficulties of the economic readjustment of the world after the war. (See the chart on page 978.)

The Period from 1922 to 1930. Though the favorable balance of trade declined to a yearly average of somewhat over \$700 million during these years, this was about 40 per cent above the prewar average. The problem of how the rest of the world could find the means for meeting this payment, in view of the fact that now it also had heavy payments to make to this country on account of war loans and our foreign investments, became a serious one. This was a factor in the scaling down of the war debt payments, which actually averaged about \$200 million a year, while the country's credit balance on foreign investments averaged \$426 million in marked contrast to the debit balance which had always existed before the war.

On the other side of the account the largest item available to the rest of the world for meeting the payment due the United States arose from the debit balance of American tourists' expenditures abroad which averaged over \$500 million a year. Immigrant remittances abroad provided over \$300 million a year but the debit balance for the use of foreign shipping amounted to only \$41 million annually. Aside from a few minor items most of the rest of the foreign indebtedness was met by borrowing from the United States; the net movement of capital out of the country in the form of loans or other investments averaged over \$325 million a year. Had this not occurred the world would have been compelled to cut down its purchases of American goods. Even this proved insufficient to meet in full the payments due. The final balance had to be paid by shipping gold

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and currency to the United States at an average rate of nearly \$100 million a year, which made still another enormous addition to our already excessive stock of gold and drained the metal from nations where it was sorely needed.

The Period Since 1930. The outbreak of the depression led to very substantial changes in most of the more important items entering into the

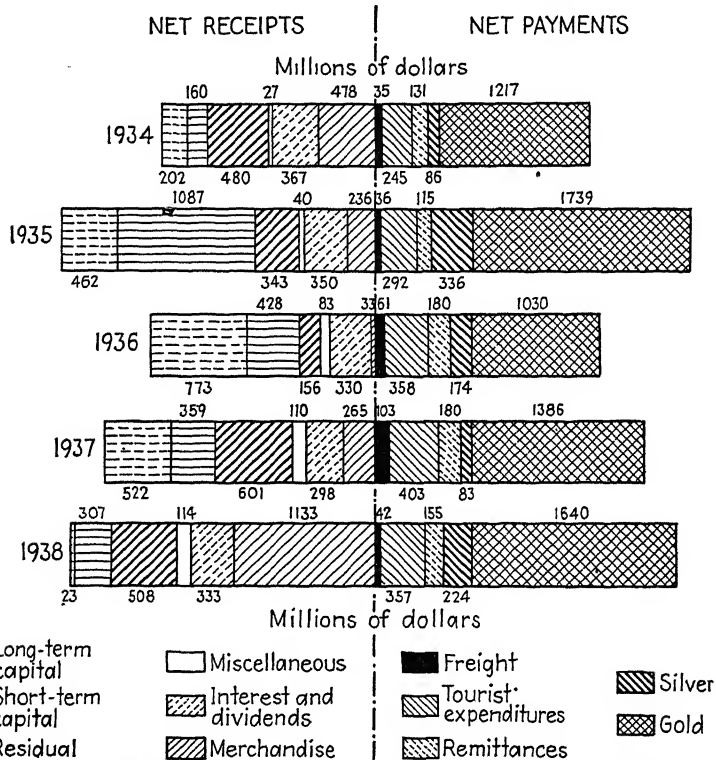


FIG. 66.—The balance of international payments of the United States, 1934–1938. (*Department of Commerce.*)

balance of international payments. On the credit balance side the favorable commodity balance of trade was cut almost in half and after 1932 practically all repayments on the war debt owed the country ceased. Finland was the only nation that continued to meet this obligation. These credit item losses were far more than offset by the complete reversal in the net movement of long- and short-term capital which took place after 1932 and resulted in a large net inflow into the United States, owing partly to the reduction of our investments abroad and partly to the increase of foreign investments or funds in the United States. The problem of meeting the large payments due the United States arising from this shift

of capital movements was made the greater by a decided decrease in the outlay of American tourists abroad and by a decline in immigrant remittances abroad. (See the chart on page 814.)

The means which the world found for meeting this debt to the United States and without which the debt could scarcely have been incurred was through the remittance of enormous quantities of the precious metals. This was greatly stimulated by the devaluation of the gold dollar in 1934 and the raising of the price of gold to \$35 an ounce, a price which it was the government's policy to pay for all gold offered and which tended greatly to increase the production of this metal. The imports of silver were due to government purchases made under legislation designed to increase the Treasury's stock of silver and raise the price of the metal to meet the demands of the inflationists and the silver interests. As a result about \$1 billion worth of silver had been imported by 1939. In the case of gold over \$7 billion had been brought in by 1938. During the next year, chiefly owing to the flight of capital and gold from Europe before war broke out, \$3 billion more came in, a movement unparalleled in history but even surpassed in the year following the outbreak of the war. These years, therefore, brought another enormous addition to our stock of gold and raised it to over \$20 billion or nearly three-quarters of the world's monetary stock of this metal. (See the charts on pages 966 and 978.)

When, during the course of the first World War, the position of the United States was changed from that of a debtor to that of a creditor nation, it was commonly stated that, as was the case with most great creditor nations, a shift in our trade from a favorable to an unfavorable balance might be expected to take place. The reason for this prediction rests on the point that, despite the fact that no one item in the balance of international indebtedness is dependent upon any other single item, since the total of the items on each side of the international balance sheet must be equal and since the commodity item and the capital payments item are commonly, though not necessarily, the largest, a marked change in one is apt to react upon the other.

The reason why this prediction has not yet been fulfilled will be clear from the previous analysis of the changes in the main items just given. During the decade of the 1920's the great outflow of American capital helped largely to sustain the favorable trade balance; in the decade of the 1930's the imports of gold and silver served in a similar way as well as helping to offset the inflow of foreign capital. We cannot expect, in the case of capital exports, or desire, in the case of gold imports, that these items will long continue to help sustain a favorable trade balance. A possible outcome, in case conditions in Europe are too disturbed, would be a net inflow of capital sufficient in time to make us a debtor country again. It is more probable that we should still look forward to a shift to

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an unfavorable trade balance. The fact that the large outlay of the United States for travelers' expenses abroad and immigrant remittances create debit items much greater than exist among the other important creditor nations might make possible the continuance of a moderate favorable balance. However, there is good reason to believe that the trends most favorable to our economic development would lead to a shift to an unfavorable balance of trade. Should this occur, it is to be welcomed rather than feared, for it is to be remembered that the term "unfavorable" used in this connection is a relic of the erroneous ideas of the early mercantilists.

CHAPTER XXXIX

FINANCIAL INSTITUTIONS SINCE 1860

Introduction. The continuation during this period of the rapid rate of economic development that marked the period before 1860 of course necessitated a corresponding expansion of this country's financial institutions. This need was made the greater because of the steadily growing importance of capital as a factor of production and the concomitant increase in the size of the typical business concern. Financial institutions that would facilitate the accumulation of capital funds on a large scale and would aid in directing the flow of those funds into the lines of economic activity where they would prove most productive thus became more important than ever. For the same reason it became all the more desirable that such institutions be made to function in the most efficient manner and that numerous defects which, in spite of the marked improvements made during the preceding period, still existed in 1860 should be minimized if not eliminated.

Particularly important was the problem created by the great expansion of the financial devices by which credit in its multifarious forms was being extended. Increasingly credit was displacing money in the settlement of financial transactions, a credit economy prevailed, and the dangers and abuses to which the use of credit is subject were seldom adequately controlled or even recognized. The relative scarcity of capital, which remained a fundamental factor in shaping our economic development until at least the close of the century, operated only to increase these undesirable tendencies. Finally, the Civil War with its financial strain wrought marked changes in both monetary and banking conditions and the manner in which this temporary emergency led to important and enduring alterations in these conditions is one of the interesting lessons revealed by the history of this period.

The Circulating Medium—The Greenbacks. At the close of the Civil War the circulating medium of the country presented a very different aspect from that which existed in 1860. (1) The amount of money in circulation had increased nearly two-thirds. (2) All specie had disappeared from general circulation and paper money alone was in common use. Of this paper money the greater portion, some \$400 million, was made up of United States notes, commonly called "greenbacks," and the re-

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mainder, a somewhat smaller total, consisted of national and state bank notes and small scrip. All this paper money was depreciated in terms of the gold standard; the paper dollar was worth only about 70 cents in gold in July, 1865. The outstanding monetary problem was what was to be done about this depreciation and the conflict centered about the retirement of the greenbacks, the issues of which were mainly responsible for the depreciation. The result was the violent greenback controversy that lasted over a decade.

Mr. McCulloch, an experienced and conservative banker who became Secretary of the Treasury in March, 1865, favored gradual retirement of the greenbacks and at first the general sentiment of most groups supported this view. In consequence there was incorporated in the Funding Act of April, 1866, a provision giving the Secretary discretionary power to retire a very limited amount of them monthly. But this year saw the beginning of a business depression, a product of the reaction from the war, which became worse in 1867. This greatly augmented the group opposed to retirement of the greenbacks, who feared that such action would reduce prices and increase the business distress, and led Congress in February, 1868, to stop further contraction after about \$44 million had been retired. The succeeding years of marked business activity finally ended in the panic of 1873. In the following stringency of money some of the retired greenbacks were reissued until the amount outstanding had risen to \$382 million. In 1874 Congress passed a bill to raise the amount to \$400 million but President Grant vetoed it. (See the chart on page 541.)

Early in the next year, however, the Resumption Act of 1875 became a law. Though a compromise measure, it provided for the reduction of the outstanding greenbacks, in proportion as national bank notes were increased, to \$300 million, for the resumption of specie payments on Jan. 1, 1879, and for the withdrawal of the paper fractional currency for which silver coin was to be substituted. Secretary of the Treasury Sherman proceeded to accumulate gold in preparation for resumption, chiefly by the sale of bonds; the greenbacks steadily rose in value, reaching par in December, 1878, and the next month specie payment was quietly resumed. With the greenbacks thus restored to par, there was little motive to present them for payment, especially as the shift to a favorable balance of trade after 1873 reduced the likelihood of any immediate or serious demand for gold for export.

Meanwhile, in May, 1878, the strength of the inflationist greenback party in Congress proved sufficient to pass an act stopping further destruction of the greenbacks and providing that any notes redeemed could later be paid out again by the Treasury. The amount of greenbacks then outstanding, a little over \$346 million, has remained unchanged ever since and this element in our circulating medium, having its origin in the

purely temporary emergency of Civil War finance, became a permanent one.

The inflationist greenback party thus won a substantial if not a complete victory and thereafter the question of the greenbacks ceased to be a political issue. But the desire for more money was not to be satisfied so easily. A prolonged period of depression followed the panic of 1873 and, even after business began to revive and the effects upon prices incident to the restoration of the circulating medium to a gold basis had ceased, the general price level continued to decline for nearly two decades. The

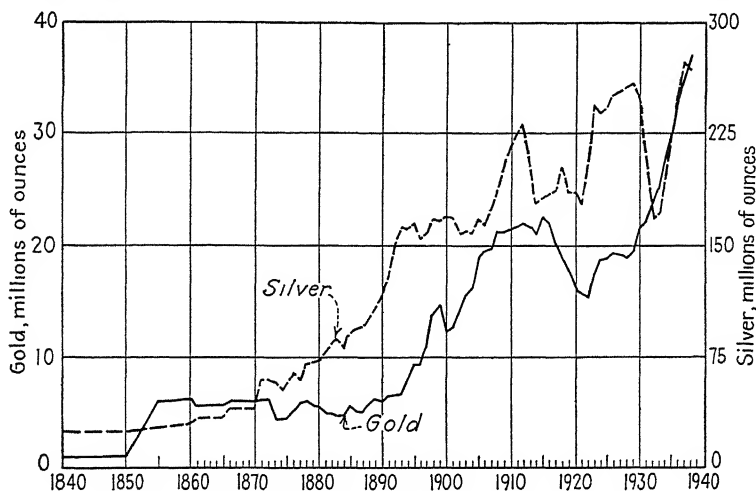


FIG. 67.—World's production of gold and silver since 1840.

resulting distress of certain groups intensified the demand for cheap money and a combination of circumstances resulted in its being shifted from the greenbacks to a demand for a greater coinage of silver and led to what is known as the free-silver movement. (See chart on page 542.)

The Free-silver Movement. The combination of circumstances that led the cheap money party to choose silver as the means for obtaining their objective is to be found in the developments that at this period brought a sudden and marked decline in the value of silver relative to gold. As will be seen by referring to the chart on this page, the world's output of gold began to decline after the middle fifties. Though the decrease was moderate in amount, a full generation passed before the output again rose to the figures attained during the height of the Californian and Australian output. On the other hand, the output of silver began to mount very rapidly after 1860, chiefly owing to the opening up of the rich mines in the western portion of the United States when this country for the first time became an important producer of silver. The result was that the commercial ratio of silver to gold which, as is shown on the chart on

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this page, had fluctuated within rather narrow limits around $15\frac{1}{2}$ to 1 since the first of the century, after 1873 rose to over 16 to 1 and soon was fluctuating around 18 to 1, a change greater than had occurred for over 200 years.

It will be remembered that the then existing coinage ratio for gold and silver dollars, fixed by the Act of 1837, was substantially 16 to 1. This act had provided for free coinage of both metals but in 1873, when the laws were being revised, the silver dollar was dropped from the list of coins to be freely minted. This action was taken with little discussion

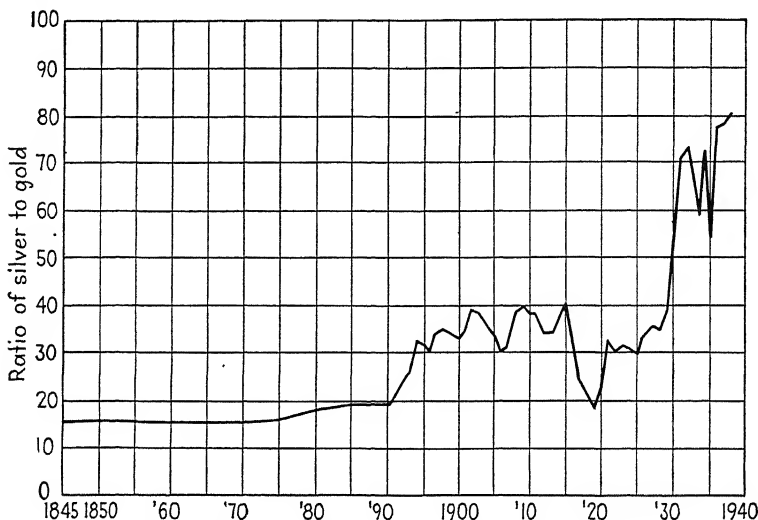


FIG. 68.—Commercial ratio of silver to gold, 1845–1938.

or opposition for, as long as the commercial ratio of silver to gold was below the coinage ratio of 16 to 1, silver was undervalued as coin and very little had been brought to the mint for coinage. But when, in the most unexpected way, the very next year the commercial ratio rose above 16 to 1 so that the coinage of silver into dollars would have been profitable, it was no longer legal; soon those who were seeking free coinage of silver began to call this law "The Crime of 1873." Free coinage of the metal now became the medium through which the cheap money group sought to secure their objective and the silver producers of the Western states, hoping thus to check the decline in the price of silver, joined forces with them.

The first measure resulting from this movement was the Bland-Allison Act of 1878 which was passed over the veto of the President. It was a compromise measure which, although not granting free coinage, did require the Secretary of the Treasury to purchase not less than \$2 million or more than \$4 million of silver a month to be coined into

dollars. It also provided for the issue of silver certificates of not less than \$10 denominations on the deposit of silver dollars in the treasury. The silver dollars, owing to their bulk, proved unpopular for general use and in spite of all the efforts made by the government tended to flow back into the Treasury; so in 1886 the issue of the more convenient silver certificates in the smaller denominations of \$1, \$2, and \$5 was authorized.

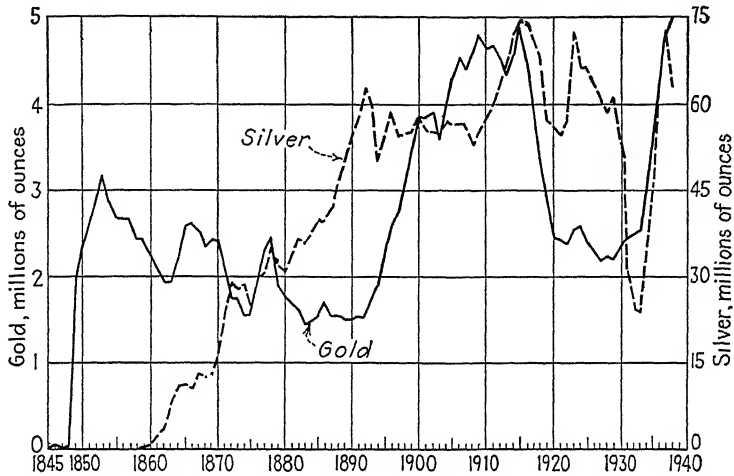


FIG. 69.—Production of gold and silver in the United States since 1845.

Meanwhile the struggle between the silver party and its opponents continued but, as neither group held a sufficiently dominating position in Congress, nothing was accomplished until 1890. After the presidential election of 1888 the Republicans were in full control of the government; in the Senate their majority was small and dependent upon a group of senators from the Western states who were favorable to free silver. The party was anxious to secure the enactment of the McKinley Tariff Bill which required the votes of these Western senators who thus found themselves in a strategic position to force the party to do something for silver.

As the price of their supporting the tariff bill, they secured the passage of the Sherman Silver Act of 1890, an example only too typical of the manner in which much legislation is determined. This law required the government to purchase 4,500,000 ounces of silver monthly, about the total production of the country at the time; in payment for this a new form of paper money was to be issued known as the Treasury Notes of 1890, redeemable in either gold or silver at the discretion of the Secretary of the Treasury and enjoying full legal tender rights. This law practically doubled the monthly purchase of silver by the government, for under the Act of 1878 the amount purchased had been about the minimum allowed, and the total of silver dollars coined under it had been about

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378 million. The success of the silver party in securing the passage of the act of 1890 led people to fear that our currency might soon be on a silver basis. This apprehension was soon greatly increased by other developments.

The Culmination of the Free-silver Movement. First in importance among these developments was a new and very abrupt drop in the value of silver. Although the world output of gold showed very little change up to 1890, the output of silver had then risen to double that of 1875. Besides this change in the supply of silver there were also important changes

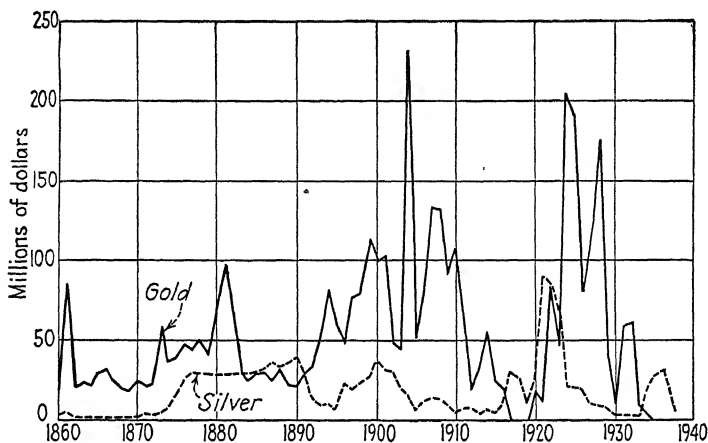


FIG. 70.—Gold and silver coinage of the United States, 1860–1938.

in the monetary demand for the metal. In the years 1871–1873 Germany had shifted to the gold standard and in 1874 the Latin Monetary Union, including France, Italy, and several other smaller European nations with a bimetallic currency system, had suspended the free coinage of silver. The consequent decline in the monetary demand for silver was greatly increased when in 1893 the government of India, one of the most important silver-using countries, suspended the free coinage of the silver rupee. At the same time a panic broke out in the United States, partly owing to the uncertainty concerning the currency, and President Cleveland called a special session of Congress to repeal the Sherman Silver Law of 1890. This was finally done, but only after much opposition and delay in the Senate. The combination of these successive losses in the monetary demand for this metal and the growing output resulted in a commercial ratio of silver to gold that in 1894 reached 32.5 to 1, which meant that the silver bullion in a dollar was then actually worth about 50 cents.

The second factor in the developments bringing the free silver movement to its climax was the panic of 1893 and its attendant reactions, which will be described in more detail later. Here it will suffice to note

that it was one of the most severe in our history and was followed by an unusually prolonged period of depression. This, of course, only accentuated the decline in the general price level that had been going on, even after the return to a gold basis, ever since 1865 and which reached its lowest point in 1896. The attendant general distress and unemployment aroused all the restlessness and discontent typical of such periods so that any measure designed to provide relief secured ready adherents. The government was also faced with serious difficulties in carrying out the announced policy of the administration to redeem the greenbacks and Treasury notes of 1890 in either gold or silver as desired by the owner. Gold was being demanded, partly for purposes of hoarding, partly for export. As the Treasury was facing a deficit redeemed notes had to be paid out again for current expenses and thus created an apparently endless drain on its gold supply. Finally during the years 1894-1896, when stoppage of gold redemption seemed imminent, the government was forced to go out and buy over \$200 million of gold, paying for it with bond issues. It was in the midst of such conditions that the movement for free silver came to its climax in the presidential election of 1896, a campaign that aroused greater popular excitement than any other since the Civil War.

The Democratic party, headed by William J. Bryan as its presidential nominee, declared for the free and unlimited coinage of silver at the ratio of 16 to 1. The reason advanced in favor of such action was the assertion that the output of gold was insufficient to meet the growing monetary demands of the world for this metal and that the resulting scarcity of gold was chiefly responsible for the steady decline in the general price level. Free coinage of silver at 16 to 1 would relieve this scarcity and ensure a rise in prices. Pointing to wheat, then selling in the Western states at about 50 cents a bushel and other farm products at correspondingly low prices, Bryan argued that by the simple expedient of free silver the price of wheat might again rise to \$1 and at that price it would require but half as many bushels for the farmer to pay his debts. To the great debtor class, so numerous throughout the West, this obviously made a strong appeal. (See the chart on page 542.)

The insistence upon the coinage ratio of 16 to 1 was in opposition to certain groups that were willing to favor free coinage of silver along with gold but only provided the coinage ratio was fixed at what was likely to be the commercial ratio of the two metals under a system of free coinage; unless it was at least as high as the commercial ratio, it was obvious that silver would drive out gold and the standard would be depreciated. But just what that commercial ratio would be it was impossible to predict with any accuracy; silver advocates even asserted that it would fall to the proposed coinage ratio of 16 to 1. That any such outcome would have

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occurred is most improbable. Had it occurred it would have greatly modified the gains that the inflationists sought. The probable outcome would have been a commercial ratio that still remained considerably above 16 to 1, which would have resulted in flooding the country with silver, driving gold out, and greatly depreciating the dollar. After all that was what most silverites really desired.

Against this program, the Republicans, with William McKinley as their presidential nominee, announced their opposition to free coinage of silver except by international agreement with the leading commercial nations of the world, which they undertook to promote. The plan for such an agreement upon a bimetallic currency system had been actively agitated ever since the decline in the price of silver in the seventies. It was based upon the belief that a bimetallic system could be successful only if it was in operation among a sufficiently large number of the great commercial countries so that their monetary demand would maintain a commercial ratio for the two metals that did not vary greatly from the coinage ratio. Even then success was obviously dependent upon there being no very marked and prolonged alteration in the relative production of the two metals. The proposal had considerable support among those who wished to secure greater stability in the general price level by lessening fluctuations in the monetary standard and believed that the worldwide decline in the price level was in no small measure due to the growing scarcity of gold. Others argued that the falling price level was due to lowered costs of production and an abnormally rapid increase in the output of agricultural products following the opening up of newly developing countries. Whereas both causes contributed to the falling price level, there is much reason to believe that the scarcity of gold was the more important; the point, however, lacks conclusive proof. All the efforts to secure an international agreement upon a bimetallic system had failed, and the prospect of success was so slight that this Republican proposal was commonly regarded as tantamount to indefinite postponement of any action. Consequently the party was regarded as standing for the maintenance of the gold standard and all the moneyed and other interests who believed that any other action meant a debasement of the currency, partial repudiation of debts, and financial chaos, rallied to its support.

By election time party lines were badly shattered. A group among the Democrats favoring gold set up an independent ticket and many silver advocates among the Republicans supported Bryan, who was also the nominee of the Populist party. As the time for voting approached, by a chance turn of affairs, the price of wheat began to rise and the silver advocates at once proclaimed it was due to a conspiracy on the part of the gold advocates to fool the farmers. Though the outcome was an electoral

vote that gave McKinley a good majority, his margin in the popular vote was an extremely narrow one.

The Disappearance of the Movement. With the danger of free silver removed, the business world heaved a sigh of the most intense relief, confidence began to return, and it became evident that the long period of depression was over. But it was not until 1900 that the supporters of the gold standard secured sufficient strength in the Senate to consolidate their victory by the passage of the Currency Act of that year. The provisions of this law declared gold to be the standard, required the Treasury

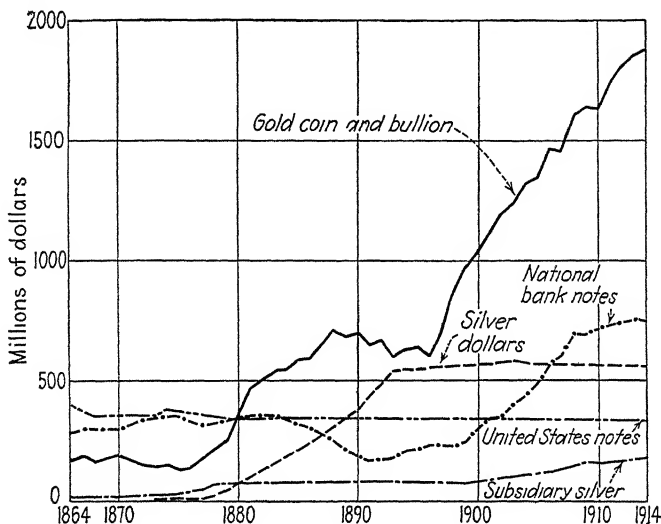


FIG. 71.—Stock of money in the United States by kinds, 1864-1914.

to keep other forms of currency on a parity with it, and established a gold reserve of \$150 million with provisions for its maintenance for this purpose. This marked the last step in the legal establishment of the gold standard, though the first step in this direction had been taken in the Coinage Act of 1834 and practically, except during periods of inflated paper, the currency had long been on a gold basis. Yet, as events soon turned out, this victory of those who supported gold with the object of preventing a depreciation of the standard proved to be far from substantial and the inflationists were still to have their innings.

Even before 1896 an increase in the production of gold had begun and soon rose to such a flood of the yellow metal as the world had never seen or scarcely dreamed of. As the chart on page 819 indicates, the world output in 1899 was over \$300 million or nearly three times the average annual output during the eighties; after 1905 it mounted to over \$400 million a year. In the main this was due to the opening up of the rich

mines of South Africa. The discoveries in the Yukon and Alaska contributed a portion, chiefly around 1900, and the introduction of the new cyanide process for the extraction of gold made it possible to work many mines previously unprofitable. By 1914 the world's monetary stock of gold was over \$8 billion or about twice that of 1896.

Along with this came a world-wide advance in the general price level. In the United States the rise from the low point of 1896 to the outbreak of the first World War in 1914 was about 50 per cent. That the increased gold supply was the main cause of this rise, though sometimes disputed, is the generally accepted explanation. As prices advanced the basis for the discontent that had been the main support of the free-silver agitation was removed. Bryan could say quite logically that, in view of the increased output of gold, free silver was no longer necessary, and the movement quickly disappeared. In fact, except for the silver mine owners, whose product fell still lower in price, the advocates of free silver actually got substantially what they wanted—cheap money—only it happened to be secured through the medium of gold instead of silver. It might be added that by 1920, as a result of the war, the money of the country, measured by the price level, had become cheaper than even the most alarming predictions as to what would result from free silver had suggested. All of this history suggests that the world is still greatly in need of a monetary system that will eliminate the many evils attendant upon a fluctuating standard of value.

The changes occurring in the country's circulating medium after 1914, being closely connected with changes in the national banking system which we have yet to describe, will be explained later. The national bank notes, which constituted the only element in the circulating medium previous to 1914 that has not as yet been covered, will be taken up in connection with the history of the national banking system to which we now turn.

The Provisions of the National Banking System. The national banking system, though immediately owing its establishment to the fiscal needs of the government during the Civil War, was also designed to introduce a new element into the banking system of the country—one in which the numerous evils still existing among the state banks would be eliminated. Aided by the prohibitive tax on state bank notes which, immediately at least, greatly reduced the number of state banks, so much was accomplished that a new era in our banking history resulted. To appreciate the results attained we must keep in mind the practices necessary for the efficient performance of the functions of a bank as explained in Chap. XXIV and then see how the provisions of the national banking act tended to promote greater efficiency in the functioning of the system than had been secured prior to 1860. As the national banking act of 1863, owing to

various defects, was replaced by a new act in 1864, the provisions of the earlier act can be passed over.

The feature of the state banking system from which the general public had suffered most was the instability of the note issues. Consequently in the national bank act particular attention was given to the regulation of this privilege. Though the new regulations were based upon the idea of an issue backed by a deposit of securities, a feature of the old free-banking system, care was taken to eliminate the chief defects which experience had shown to exist under the earlier state laws. Under the national banking law, only United States bonds deposited with the Treasury were to be used as security and banks could issue notes up to 90 per cent of their market value but not over that percentage of their par value. The notes were not made legal tender but were to be accepted in payment by all national banks and by the government in all cases where specie was not required by law. They were to be redeemed on presentation at the bank of issue and also at agencies in the principal cities. The latter provision was repealed in 1874; instead, the Treasury was made the sole redeeming agency and the banks were required to maintain there a redemption fund equal to 5 per cent of their outstanding issue.

Originally, the total issue of national bank notes had been limited to \$300 million, partly through fear of inflation as long as suspension of specie payment continued. In 1865 an amendment sought to control the distribution of this total among different sections of the country, but, despite various later changes, it proved unsatisfactory. Finally, in 1875, the act providing for the resumption of specie payments also repealed all provisions either limiting the total note issue or affecting its apportionment, thus establishing real freedom of issue. The national bank notes issued under these provisions proved absolutely safe and circulated freely throughout the country and thus constituted a vast improvement over the state bank notes which they replaced. Their only real defect was lack of elasticity as will be explained later.

The regulations governing national banks that looked towards securing a more efficient performance of their functions of deposit and discount were various and closely interrelated. Especially important among these were the reserve requirements. National banks in places designated as central reserve cities, which included New York and later Chicago and St. Louis, were required to keep a reserve of 25 per cent of their deposits. Outside of the 5 per cent note redemption fund and clearinghouse certificates, this had to be made up of "lawful money" and be kept in the banks' own vaults. Banks in reserve cities, which came to include about two dozen additional leading business centers, were also required to have a 25 per cent reserve, one-half of which could be kept on deposit in the banks in central reserve cities. All other national banks had to maintain a

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reserve of 15 per cent, of which three-fifths could be on deposit in either class of reserve cities. These requirements served both as a protection to depositors, by compelling the bank to keep a sufficient amount of money to meet at least ordinary demands, and as a check upon over-expansion of loans. Their importance was greatly enhanced because from this time there was such a marked increase in the practice of extending bank credit and making loans by means of a deposit credit instead of by the issue of bank notes, as had been the more general custom, at least outside the larger cities, previous to the Civil War.

The permission to count deposits in reserve cities as a part of the required reserve tended to weaken the actual situation. Banks in the smaller places wished to have deposits in one or more of the larger financial centers against which they could draw for the convenience of customers who desired funds payable in those centers. When the large city banks began to pay interest on these deposits, the country banks developed the habit of shifting any funds they could not use at the moment to the larger cities, chiefly New York, to secure this interest. Such bank deposits, being subject to sudden and heavy withdrawals, compelled the New York banks to maintain a large proportion of very liquid assets, and lending on call in the stock market became the favored means for so doing. The combined effect of all this was to pyramid the volume of deposits based on the actual cash reserve of the whole system, to concentrate the ultimate reserve in New York, and to accentuate the fluctuations in the money market, especially in times of financial stress.

Among the other regulations governing national banks and tending to promote sounder banking methods, were those designed to secure greater publicity as to the condition of these institutions and an effective administration of the law. The administration of the system was vested in the Comptroller of the Currency. Five times a year each bank was to send him a report of its condition, and he was to make periodic examination of the banks and in general enforce the provisions of the law. Other safeguards imposed double liability upon the stockholders in case of a failure and required the accumulation of a surplus. A limitation designed to improve their character prohibited loans to any single individual or concern in excess of 10 per cent of the paid-in capital of a bank; other than this there was no limitation on loans to the directors of a bank. Another most important limitation, designed to secure greater liquidity of their assets, prohibited the banks from making loans on the security of real estate, a practice that had proved disastrous to many state banks.

Aside from the regulations intended to ensure sounder banking methods that have just been noted, it is important to understand certain features of the system as a whole. In the first place, unlike the previous

entrances of the Federal government into the field of banking, it did not set up a single and dominating central bank like the earlier United States Banks; rather it provided for a large number of relatively small banks scattered throughout the country. The system was highly individualistic and decentralized and in this feature reflected the traditional opposition of the people toward any concentration of banking power. The law required a bank to have a minimum capital rising from \$50,000 in places of less than 3,000 inhabitants to \$200,000 in places of over 50,000 inhabitants. Branch banks, with a minor exception, were not permitted and a clause which prohibited the banks from investing in the stock of any other corporation checked any extension of control in this manner. The consequent decentralization of control produced certain elements of weakness. The management of many banks fell into the hands of less experienced bankers, and it was impossible to secure that unity of action in determining bank policies which is so important either in coping with the situation in time of financial crisis or in helping to check the development of conditions that bring on such a crisis in the first place. Consequently when trouble came there was a tendency for each bank to try to save itself and let the devil take the hindmost; the results were distress and losses that might have been avoided had more unity of action prevailed.

Although the independent treasury system was continued after the introduction of national banks, the Secretary of the Treasury was authorized to deposit some of the public funds in certain selected banks known as depository banks, which were required to provide special security for such deposits. In the earlier decades of the national banking system the amount of government deposits so made was small; subsequently they tended to grow, particularly in times of monetary stringency. An unanticipated difficulty of the independent treasury system arose at times when large payments to the Treasury fell due with no corresponding increase in government expenses at the same time, thus tending to create a stringency in the money market. To relieve this the Treasury might transfer some of its funds to the depository banks. But the practice also developed of making such deposits even when government transactions were in no way responsible for the monetary stringency. In consequence the banks, feeling that they could count on such governmental assistance in an emergency, tended to become less cautious in extending credit and maintaining adequate reserves. These difficulties were among the chief reasons for the ultimate abandonment of the independent treasury system after the adoption of the Federal reserve system.

The Growth of the National Banking System. It was the original hope that most of the existing state banks would give up their state charters and become national banks, and the law was designed with this end in

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view. At first various difficulties arose, partly of a technical legal nature, which required state as well as Federal legislation to overcome, and there was some delay in securing state action. In addition the 10 per cent tax on state bank notes effective in 1866, by removing one of the privileges deemed especially valuable to the smaller banks, gave a great impetus to the shift. By the autumn of 1865 over 1,500 national banks with over \$450 million of capital, surplus, and undivided profit had been organized, substantially equal to the number of state banks existing in 1860; by 1868, barely 250 state banks remained. The national banking system was thus promptly established in a dominating position, though it soon became evident that the state banks were not to be eliminated. (See the charts on page 833.)

After 1865 the number of national banks increased at a moderate but fairly steady rate, interrupted only by slight setbacks after the panics of 1873 and 1893; by 1900 it had risen to over 3,700 with over \$1,000 million of capital, surplus, and undivided profits. It is significant that the item loans and discounts, with which individual deposits tended to keep pace, showed a much higher rate of growth, the total of over \$2,600 million for 1900 being nearly five times that for 1866, thus reflecting the marked tendency toward the use of deposit currency during this period. The note circulation, on the other hand, showed an opposite tendency; by 1866, when the first rush to join the national banking system was over, it stood at \$268 million. By 1873 it had risen to \$339 million, but in spite of the removal of the limitation on the total in 1875 the circulation began to decline. Up to 1884 the change was slight; then came a sudden drop to \$129 million in 1889, and though there was some gain after 1891 it was not until 1900 that it rose above \$200 million. The difficulty with the notes, which this indicated, led to an amendment of the law in 1900. (See the chart on page 825.)

The chief defect in the national bank notes was their lack of elasticity. Experience proved that the amount in circulation instead of fluctuating with the varying needs of business tended rather to fluctuate with the price of the government bonds that were required to secure them, since this price was an important factor in determining the profit to be obtained from their issue. During the seventies, when the price of bonds had been relatively low, note issue had been reasonably profitable; during the eighties, as many bonds were redeemed, their price rose rapidly. This situation brought about the sharp decline in the note circulation at that time. The importance of elasticity in the bank notes arose from the fact that there was no other element in the money in circulation that was elastic; the amount of greenbacks and of silver was fixed by law; the amount of gold depended chiefly on other things than the volume of business and could not be easily and quickly altered. The lack of elasticity

in the circulating medium would have caused more trouble had it not been for the growing use of deposit currency during this period, for that was increasingly used as a substitute for money and it did possess elasticity. The main difficulty arose from the fact that, although this proved fairly satisfactory in ordinary times, it completely failed in times of panic. At such a time, when the opportunity to get needed funds was all the more necessary in order to allay the panicky feeling, every bank to protect itself sought to contract its loans and the situation was only aggravated.

The amendment to the national banking law, incorporated in the Currency Act of 1900, which sought to improve the situation, made no radical change. The main provisions were designed to make the issue of bank notes more profitable. Banks were now allowed to issue notes up to 100 per cent of the market value of the deposited government bonds but not over that percentage of their par value. At the same time provision was made for refunding government bonds by a new issue at a lower rate of interest which would lower their price and the government tax upon the notes secured by these bonds was reduced. Another amendment with a different objective reduced the minimum capital required of banks in places of 3,000 or less population from \$50,000 to \$25,000, mainly in the hope that more banks in these small places would enter the system.

These amendments did result in a marked expansion both in the number of national banks and in their note issue; the former rose to over 7,500 by 1914 and the latter to over \$700 million. The lack of real elasticity in the note issue still existed and, as has so generally been the case in our financial history, it required the devastating experiences of another panic to arouse the country sufficiently to secure a substantial reform. The panic of 1907, which provided this stimulus, though not followed by the long-drawn-out business depression that succeeded some panics, was marked by the most acute financial stringency while it lasted; and this once more drew attention to the defects of the national banking system. Businessmen and bankers insisted that the system was antiquated, that certain of its features had been largely shaped by temporary conditions arising out of Civil War time needs which had long ceased to exist, and that other features had been a product of old prejudices which the country had now outgrown—in short that a complete reorganization of the system was essential. Congress at once took steps toward this end.

The first result was to amend the law by the passage of the Aldrich-Vreeland Act of 1908. This was regarded as a purely temporary measure to meet such needs as might arise before a general revision, which would take some time for consideration, could be enacted. It served this purpose well in the brief panic that followed the outbreak of war in 1914. The essential feature of the law provided for an emergency note issue. Individual banks were authorized to issue notes secured by certain bonds

other than those of the government, and groups organized as Currency Associations could issue notes secured by commercial paper. By making other classes of banking assets available for security, a rapid increase in the notes was made possible. But elasticity also required contraction when pressure had passed and this was secured by a tax on these emergency issues starting at 5 per cent and rising 1 per cent each month up to a 10 per cent maximum.

To study the problem of a general revision of the national banking system, Congress created a Monetary Commission of its members headed by Senator Aldrich. The result was a far more thorough and scientific investigation than had ordinarily preceded important legislation in this country. After some three years of work the commission submitted its report to Congress in 1912. But owing to the long debate, followed by a shift in the party in power after President Wilson's election, it was not until 1913 that the results were finally embodied in the Federal Reserve Act. As many provisions of this law were shaped by developments that had occurred among the state banks during this period, we must learn what had been taking place there before attempting to explain them.

The New Era of State Banks. As previously suggested, the state banks, that just after 1866 seemed threatened with extinction, were after all destined to a revival in spite of their loss of the privilege of note issue. In the course of time, in fact, the state banks and trust companies as a group attained proportions equal to those of the national banks and again became a most important element in the banking structure of the country. Among the state institutions, however, there developed several different types representing a specialization of functions that did not exist among the national banks, all of which were essentially commercial banks in character. The state institutions came to be divided into three main groups: commercial banks, trust companies, and savings banks, either stock or mutual. In actual practice the line between the institutions performing the functions suggested by these names was not sharply drawn, partly because of the great variations in state legislation. As a rule the savings banks were more definitely specialized in their activity and the trust companies in time tended to engage in nearly every form of banking service. As the state commercial banks and trust companies became the chief competitors of the national banks, both groups are combined in the following figures of growth.

In 1875 there were probably between 600 and 700 state banks and trust companies with something over \$100 million of capital and surplus, about one-sixth that of the national banks at that date. Up to 1886, when the number had risen to about 1,250, the rate of growth was moderate and the number of trust companies included in this total was still insignificant, about 40 in all. Then a more rapid increase began and by 1893

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the number of state commercial banks, some 3,700, slightly exceeded the number of national banks. The panic temporarily checked the advance, but after 1901 the number grew still more rapidly, and by 1915 there were about 14,600 such banks and over 1,600 trust companies with a capital

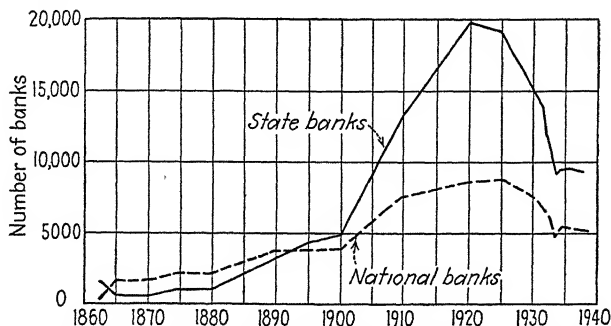


FIG. 72.—Number of commercial banks in the United States since 1863.

and surplus of over \$700 million for the former and \$900 million for the trust companies; combined, only a little below the total of \$1.8 billion of the national banks. This growth resulted in frustrating the original hope of securing a unified banking system under Federal control and

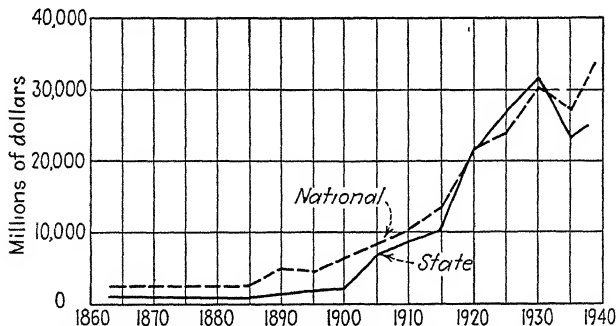


FIG. 73.—Resources of commercial banks in the United States since 1863.

continued the decentralized system with control divided between the state and the Federal authorities. It also indicated that the national banking system did not function in such a way as to meet all the needs of the country. The reasons for that are found in the character of those institutions that developed under state regulation.

The Character of the State Commercial Banks. The lines of development and of banking practice that appeared among the state banks during this period were of course largely shaped by state legislation. As this varied greatly, only the more general tendencies in regulation can be noted here. These eventually came to be of such a character as to eliminate

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most of the worst abuses of the ante-bellum period and thus mark a new era in state banking history.

For a considerable period after the Civil War there was relatively little state legislation concerning banks. The ante-bellum laws had been more concerned with protection of the note issues than anything else, and as the notes disappeared one of the chief reasons for control was removed. Protection of depositors had never been considered as of equal importance. The number of state banks had been greatly reduced; some states now made no provision for chartering new banks and others allowed them to be organized under general incorporation laws. In many of the older states a special act of the legislature was necessary to obtain a charter. Barnett¹ concludes that between 1865 and 1875 most state banks were incorporated under special acts and between 1875 and 1887 under general business incorporation laws. As it became evident that there was a growing demand for state banks, more and more states began to enact general banking laws, under which most such institutions have been chartered since 1887. The revival of state banking legislation about this time, while facilitating the organization of state banks, also brought a marked improvement in their regulation and reflected a growing understanding and acceptance of sound banking principles, a slowly developed crystallization of much sad experience.

In general the improvements introduced by this new body of legislation showed a tendency to approach, though seldom to equal, the standards set up by the national banking system. Thus, in the group of regulations concerning capital, most of the states required a certain minimum amount, commonly varying with the population of the place of location. In the smallest places this minimum was generally between \$10,000 and \$25,000, or considerably below the \$50,000 minimum for national banks which remained in force until 1900. There was also a tendency to insist that more, if not all, of the capital should be paid in before business started and to strengthen the requirements concerning the accumulation of a surplus. Provisions for the assessment of stockholders to make up impaired capital and for imposing a greater liability upon them, generally double, in case of the bank's failure became common, though not always very effective in practice.

In the effort to improve the character of the banks' assets the amount of loans to single individuals or concerns was limited, though less strictly than in the case of national banks; unlike the latter, limitations were also placed on loans to directors and officers. In marked contrast with the national banking system, almost all the states permitted loans on the security of real estate, though sometimes introducing minor limitations.

¹ BARNETT, G. E., "State Banks and Trust Companies Since the Passage of the National Banking Act," Washington, 1911. Much of what follows has been based upon this authority.

Typically the states were slow in recognizing the importance of reserve requirements, partly because the state banks held a relatively larger proportion of time and savings deposits than the national banks; but in time the growing use of deposit currency increased the need for this safeguard and led most states to introduce such requirements. As a rule these requirements were appreciably below those set up for the national banks and, unlike the latter, generally provided for a lower percentage against time and savings than against demand deposits. Deposits in larger city banks up to a certain amount could be counted as a part of the reserve as in the case of national banks, thus increasing the danger which this practice involved of pyramiding deposit liabilities on the total cash reserve of the country.

Provisions directed toward securing a stricter enforcement of the laws were also generally enacted by the states, chiefly after 1887. More detailed and frequent reports were demanded in practically every state with provision for their publication, and a regular examination of the banks by state officials and often by the directors as well was insisted upon. There was also a general move to adopt more efficient methods for handling the affairs of any bank that got into financial difficulties.

As in the case of the national banks, state legislation tended to develop a highly individualistic system of banking, even more so than that existing among the states before 1860. Most of the states either prohibited branch banks or made no provision for them. In some states the right to hold stock in other corporations was employed as a means for controlling other banks; elsewhere common ownership of stock by groups of individuals was sometimes used to secure the same result. The decentralization characteristic of both state and national banks was in marked contrast with the tendencies prevailing in most foreign countries.

In the light of the preceding account of the trends in state banking legislation, we can now explain why it was that, after the national system appeared on the point of absorbing all the state banks, these began to grow again and in time became an active rival of the national banks.

The Causes for the Revival of State Commercial Banks. The explanation, of course, is to be found in the relative advantages for carrying on a profitable business as these were determined by the legislation regulating the two systems. The study of Barnett pointed to the conclusion that there were four main factors entering into this question of relative profitability: (1) The superior credit and confidence enjoyed by the national banks, which attracted both deposits and capital. This advantage was especially marked in the early years before more effective regulation of the state banks became common, but still remains appreciable. (2) The right to issue notes given to the national banks and practically denied to the state banks. This advantage also became far less important after

the early eighties, partly owing to the increased tendency of banks to use deposit currency rather than bank notes, but mainly a product of the lower profit from the issue of notes, though this profit was somewhat greater after 1900. (3) The greater freedom of choice allowed state banks in the character of their loans, especially the right to make loans on the security of real estate. This privilege was particularly important for banks in small places in the agricultural districts. (4) The low reserve requirements for state banks, especially the common tendency to require a lower reserve against time and savings than against demand deposits.

The importance of these four factors for different banks varied considerably according to their size, the economic activities of the region in which they were located, and the class of banking business which they emphasized. Although there were various other factors entering into the situation such as the state restrictions on the investment of savings deposits, the privilege of holding stock in other corporations enjoyed by some state banks, or the privilege of being a depository for government funds enjoyed by the national banks, these factors were of minor importance. Of the four main factors listed it will be seen that only the first two would lead to the choice of a national rather than a state charter, and that their importance greatly declined after the early eighties. This combination of circumstances thus affords the chief explanation for the very rapid growth of state banks that subsequently took place. The law of 1900, by reducing the minimum capital requirement and increasing the profitableness of note issue, made national charters somewhat more attractive, but not sufficiently so to prevent a growth of state commercial banks that was more rapid than that of the national banks down to the end of 1914.

State Trust Company Development. Though the commercial banks were the state institutions that came into the most direct competition with the national banks, the latter also had to face the rivalry, more or less direct, of the state trust companies. The growth of trust companies, as indicated by the figures previously given, was very rapid after about 1890 and may be attributed to two causes: (1) In so far as trust companies carried on the same lines of business as did the national banks, the state laws governing their activities were commonly more lenient than the national banking laws, notably on the points of reserve requirements and limitations on the character of investments. (2) The trust companies had the power to engage in a great variety of financial activities that were not open to national banks and there was a steadily growing demand for services of this sort, particularly in the large cities. The advantages thus enjoyed by trust companies were such that national banks in the larger financial centers often secured some affiliation with a trust company, expecting to benefit through the mutual interchange of business.

The growing demand for various financial services which the trust companies undertook to provide was due chiefly to the rapid spread of the use of the corporate form of business organization and the resulting varied issues of securities, the rise of large personal fortunes with the increasingly complex problem of their management, and the growth in volume and size of real-estate transactions; however, numerous other developments contributed to the outcome. Thus railroads, and later other corporations, issuing bonds got trust companies to act as trustee for the bondholders. Corporation stocks were often registered and transferred by trust companies. Individuals desiring to have property placed in trust found the enduring trust company a more reliable and satisfactory medium than a private individual. The settlement of estates, the handling of receiverships, or the care of a private individual's financial affairs were tasks that the trust company became well fitted to undertake. The development of such financial services, along with numerous others, has resulted in the trust company's being called the department store of finance. In this field it has become the outstanding example of the modern tendency toward integration, so common in many other lines of economic activity.

Although most of these varied activities had been developed by the trust companies during the second half of the nineteenth century, the last quarter of the century also saw them increasingly active in the general banking business. By the middle eighties the other banks in the commercial banking field were complaining of this competition, pointing out that, as there was very little regulation of trust companies at this time, the latter had a great advantage in this rivalry. As a result, the movement toward state regulation of the trust companies was given a great impetus and in time spread to all the states. Also, when the Federal reserve system was set up, national banks were allowed to engage in some of the activities carried on by trust companies from which they had previously been debarred so that the competition between the two groups was placed on a less uneven basis than theretofore.

State Savings Banks. Though the business of accepting savings deposits was carried on by most commercial banks, both national and state, there was also a group of state institutions that practically confined itself to this business. Previous to 1860 the growth of such savings banks had been slow; the number at that date was probably less than 300 with around \$150 million of deposits. A fairly rapid growth occurred between 1850 and 1875, when deposits rose to over \$900 million. A setback followed during the years of depression, but after 1881 there ensued a steady expansion in the deposits in these banks until by 1913 they had risen to around \$4 billion. This amount, however, represented less than half of the total savings deposits of the country, for it covered only the deposits

in mutual savings banks. These, together with the much less important stock savings banks, were the institutions mainly confining their activities to the handling of savings deposits. By far the greater portion of the mutuals was located in the North Atlantic states; a few existed in some of the North Central states and California.

Although the much less numerous stock savings banks were more scattered, the result was that many localities had no specialized savings bank and so were dependent upon commercial banks and trust companies for savings depositories—an outcome that these groups were generally ready to foster in the desire to expand their business. As a result they secured an increasing proportion of the total savings deposits of the country. In 1913 of the total savings deposits (including time certificates of deposit and postal savings) of over \$8.5 billion, the mutual savings banks had less than one-half, the other state banks a slightly smaller proportion, and the national banks somewhat over one-sixth.

During this period the private banks, which had been fairly numerous before 1860, steadily declined in relative importance. Though no satisfactory statistics are available for most of the period, we know that one state after another prohibited them; the decline in number appears to have been slow until 1930, since when they have been almost eliminated.

By keeping in mind this background of the development of the various types of state banks after 1860, we shall have a better understanding of the changes made in the national banking system by the passage of the Federal Reserve Act in 1913.

The Provisions of the Federal Reserve Act. We have seen that the experiences of the panic of 1907 by bringing to a head the demand for a reform in the banking system resulted immediately in the Aldrich-Vreeland Act of 1908 which made temporary provisions for an emergency currency and created the National Monetary Commission to report on the needed reforms. Its report was presented in 1912. The plan proposed met with such opposition in Congress, chiefly based on the fear lest it give too much power and control to bankers, especially the great Eastern financial interests, that it could not be got through Congress before the Republican administration was replaced by a Democratic one. This led to considerable alterations in the plan, chiefly designed to meet the traditional fear of too great centralization of power, and the resulting Federal Reserve Act was finally passed in December, 1913. The significance of certain provisions of the law will be better appreciated if it is kept in mind that the two reforms generally accepted as being most urgent were (1) a somewhat more centralized system with greater control by the government, and (2) a more elastic note issue.

✓ The first of these objectives was provided for by the creation of the Federal Reserve Board and a group of Federal reserve banks each serving

one of the twelve districts into which the country was finally divided. At the head of the system stood the board made up of seven members, including the Secretary of the Treasury, the Comptroller of the Currency, and five others appointed by the President with the advice and consent of the Senate; this established control by the government. This board was vested with the general supervision of the Federal reserve banks and the issue of Federal reserve notes. It could require these banks to rediscount the discounted notes of one another at rates that it fixed and could temporarily suspend the reserve requirements subject to certain taxes.

↓ The creation of the Federal reserve banks was, from the nature of their functions as exclusively bankers' banks, a step toward centralization in banking control; but the legal requirement that not less than eight nor more than twelve such banks be created and the final decision to create twelve reflected the fear of too great centralization. The common policy among European countries of having one great central bank ran contrary to the democratic ideals dominant in this country since the overthrow of the Second United States Bank. It was also argued that, however well adapted to the conditions in the relatively small countries of Europe a single bank might be, this country was far too large and the economic activities of different sections far too diverse to make it practicable here, quite regardless of any democratic ideals.

↓ A board of nine directors was placed over each Federal reserve bank, three being chosen by the Federal Reserve Board and two each by the three groups of large, medium-sized and small member banks in each district. To prevent too exclusive control by bankers, a majority of the directors was chosen to represent other economic interests, the public, and the government. Designed to function as a bankers' bank, each Federal reserve bank was to receive deposits, hold reserves, issue notes, make rediscounts, and clear checks for the member banks in its district. It could also deal directly with others in the open market by buying and selling certain classes of paper. Furthermore it was to serve as a depository and fiscal agent for the government, thus putting an end to this function of the independent treasury.

↓ Underlying the Federal reserve banks were the so-called "member banks" made up of two groups: (1) all national banks, and (2) such state banks as chose to become, and were accepted as, members. The law required all national banks to join the system or give up their Federal charter; it also included certain provisions designed to facilitate the shifting of state banks to national banks. Such state banks as still desired to exercise the powers granted by their charters were allowed to become members of the Federal reserve system provided they complied with the reserve, capital, and certain other requirements established for national banks. All member banks, both state and national, had to

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subscribe to stock in the Federal Reserve Bank of their district an amount equal to six per cent of the member bank's capital and surplus. To prevent the consideration of profit from becoming too dominant in the management of these banks, the dividends on this stock were limited to 6 per cent.

✓ With the object of strengthening the system by inducing more state banks to take out Federal charters, a number of changes were made to give national banks certain advantages they had previously lacked in their competition with the banks enjoying state charters. Thus, national banks were allowed to act in various fiduciary capacities where competing state banks existed, the prohibition of loans on real estate was modified, and reserve requirements were reduced. Unfortunately, subsequent experience showed that some of the modifications made in the effort to meet the competition of state banks and trust companies led to undesirable consequences—one more illustration of the difficulties that arose from the lack of centralized control over our banking system.

Thus far this account has dealt mainly with the general structure of the system. The centralizing tendency of the law is to be found in various phases of the operation of the system as well as in its general organization. Among these the provisions concerning reserves were especially significant.

• The legal reserve requirements of the law made a distinction between time deposits payable after 30 days' notice and demand deposits. Against the former, as the law was amended in 1917, a reserve of 3 per cent was required for all banks; against the latter 13 per cent for central reserve city banks, 10 per cent for reserve city banks, and 7 per cent for country banks. This represented a very considerable reduction as compared with the old national banking law, especially on time deposits where the desire to meet state bank competition was obvious. All this legal reserve now had to be on deposit in the Federal reserve bank in the district of the member. It did not include such cash as the bank kept on hand to meet withdrawals nor any deposits it might wish to maintain in member banks elsewhere; this was left to the discretion of each bank. The Federal reserve banks in their turn were required to keep a legal reserve of lawful money of 35 per cent of their deposits; in case of emergency this limit could be temporarily suspended by the board, subject to a graduated tax on the deficiency.)

✓ In this way the legal reserve of the system was concentrated at twelve points. If there happened to be a drain in any one district the reserves in other districts could be drawn upon either by sale of assets of the reserve bank in some other district through what are called open-market operations or by the rediscounting of discounted paper at some other reserve bank. Thus through the concentration of reserves and the facilities for shifting them easily to other places greater efficiency in the use of reserves

was secured, a point of the utmost importance in time of stress, but at all times contributing to the mobility of funds that increases the likelihood of their most economical use.

Another important aspect of the greater concentration of control provided under the operation of the Federal Reserve Act arose from the influence of the board and the reserve banks upon the expansion or contraction of bank credit and the money market. This influence was chiefly exerted through two means: (1) the open-market operations of the reserve banks, and (2) the control over rediscount rates. By the operation of selling or buying certain limited classes of paper in the open market anywhere in the country, the reserve banks could withdraw from, or add to, the supply of funds available in any region and thus influence in some measure the current money market rates. By fixing the rates at which reserve banks rediscount eligible paper, they could largely determine the minimum rates that member banks must charge their customers for loans, as long at least as those banks were in a position where they must depend on rediscounting at the reserve banks in order to extend their loans.

Under the individualism of the old national banking system, each separate bank had been left to act as it saw fit in expanding or contracting its loans as long as it kept within the law regarding reserve requirements. Under the Federal Reserve Act there was a very practical check, at least on expansion, arising from the power of the district reserve bank to fix the rate on discounted paper subject to the still higher power of the Federal Reserve Board to fix the rate in any district where it saw fit to intervene. Experience shows that, the more local a banking institution, the more likely it is to give way to local pressure for greater credit. The Federal reserve banks, as large regional banks, were less subject to such pressure, though they did not entirely escape strong regional demands. But above them the board, representing nation-wide interests, would, it was hoped, exercise such control as common interests dictated; as events proved, even it was not entirely exempt from such pressure.

This great centralized power could be employed if necessary, particularly in periods when prosperity was developing into dangerous boom-time activity and speculation, to apply the brakes and prevent the extremes that led to financial disaster and panic. Success here depended upon the courage, freedom of action, and wisdom of the members of the board and, after all, they were human. In fact an outstanding feature of the Federal reserve system was the greater dependence for its success upon human wisdom and judgment in its administration, as contrasted with the inelastic, cut-and-dried provisions of the old national banking law. In this element of human judgment lay much of its hope but also possibilities of great weakness.

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As previously indicated, after greater centralization of control, more elasticity of note issue might be considered as the leading objective of the Federal Reserve Act. This was secured by providing for what was called "asset currency," that is, notes secured by certain classes of short-time paper arising out of transactions in trade, industry, and agriculture, in place of the notes secured by government bonds under the old national banking law. The new notes were issued by the Federal reserve banks and were secured by specific classes of high-grade short-time paper, or by the deposit of gold or gold certificates. Against its issue each Federal Reserve Bank was required to maintain a gold reserve of 40 per cent, though in emergency this limit could be temporarily suspended by the board, subject to a graduated tax on the deficiency. Additional provisions were designed to bring about the gradual retirement of the old bond-secured national bank notes, but there was also authorization for the issue of Federal reserve bank notes which were to be similarly secured. Elasticity in the supply of Federal reserve notes was expected to arise from the fact that as business expanded the supply of commercial paper available as security for them would increase and so permit any needed expansion up to the limit set by the gold reserve requirement. As this paper was short-time and self-liquidating, contraction would follow any decline in the volume of business. Prompt retirement was also aided by a provision practically prohibiting reserve banks from paying out the notes issued by other reserve banks received in the course of business and requiring that they be sent back to the bank of issue. The further provision that these notes were not to be legal tender and could not be counted as part of the legal reserve of a bank had the same result.

Aside from its effect on note issue, the Federal reserve system also provided for a greater degree of elasticity in the deposit currency. Under the old national system, as was previously explained, this deposit currency had provided most of such elasticity as existed. Whereas this proved fairly adequate in times of normal business conditions, it perversely contracted in times of panic just when expansion was most needed. Various features of the reserve system tended to overcome this defect, notably those making possible a temporary suspension of the reserve requirements and those providing for a more efficient mobilization and control of all the available banking resources of the system. However, the greater elasticity provided created the danger of too great expansion unless a wise control was exercised.

Although greater centralization of control and increased elasticity of note issue were the most significant improvements in our banking system secured through the Federal Reserve Law, there were various other progressive features embodied in the new system, some of which deserve notice.

The Federal reserve banks by setting up an extensive system for the clearing and collection of checks have provided a much more efficient and economical method than prevailed theretofore, though the move met with strong opposition from many banks which faced a loss of revenue through the insistence on par collection. A service of somewhat similar character was provided by the creation of the Gold Settlement Fund under which the reserve banks maintain a large gold deposit in the Treasury which they are allowed to count as a part of their legal reserve. By settling daily balances between the reserve banks through book transfers of these funds, considerable expense in the actual shipment of money is saved. Another improvement resulted from the provision enabling the government to use the reserve banks as fiscal agents. Increased efficiency in the handling of government funds resulted and, under an amendment of 1920, the reserve banks took over much of the work of the former subtreasuries, which were then abolished; thus an end was made of the independent treasury system and its attendant difficulties.

Another group of provisions in the Federal Reserve Act was designed to aid the financing of foreign trade and other international transactions. Federal reserve banks were empowered to establish agencies, and the larger national banks, branches, in foreign countries. Later the Edge Amendment of 1919 authorized the formation of corporations to engage in international banking and other international operations. A more effectively organized market for foreign bills was also secured.

The Development and Work of the Federal Reserve System. Actual operations under the Federal reserve system did not start until November, 1914, when the worst of the effects of the financial panic incident to the outbreak of the first World War were over. During the years immediately ensuing the work and development of the system were dominated by the conditions arising out of the war. From the time the United States entered the conflict, the fiscal needs of the government in financing the war so completely controlled the banking development that the latter can be explained only in connection with the history of wartime financing, a topic that will be taken up in more detail in another chapter. At this point it must suffice to note that the financing of the war by the government with the tremendous strain involved would scarcely have been possible under the old national banking law.

The effective mobilization of the banking resources of the country through the greater concentration of control provided by the Federal reserve system was essential to conserve those resources and ensure their use for the nation's chief needs. Also, the provisions of the new system, making possible a much greater expansion of note issue and deposit currency, extended by further amendments during the war, proved absolutely

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essential in carrying out the financial plans adopted. That the result was such an expansion of note issue and bank credit as to produce inflation with all its attendant evils must be charged to the plan of financing adopted. However, it must be admitted that the new system made this possible, whereas the old system, had it proved feasible to adhere to it, would have checked such an outcome. Another result was that the trend in the subsequent development of the system was vitally influenced by the abnormal strain to which it was subject in these early and formative years of its existence.

In the sudden and sharp depression that came as the aftermath of the war in 1920-1921, the new system showed its superiority over the old system. In spite of the severity of the drop in prices and the check upon business activity, the country was able to pass through these difficulties without developing such panicky conditions, with the unnecessary losses attendant thereupon, as had marked earlier business revulsions. This seemed to signify that at least one important objective in banking reform could be claimed as an achievement of the new system.

A further, and in some respects a better, opportunity for judging of the effectiveness of the new system was provided in the decade that followed, when, for the first time, the Federal Reserve Board could be said to have been substantially free from domination by the government's fiscal needs, though it still faced many problems originating in the war. That there were many ways in which the system was proving more efficient was fairly established during these years. The check clearing and collection system was extended, the gold settlement fund proved extremely economical, the government fiscal work taken over by the reserve banks was efficiently performed, the financial handling of international transactions was facilitated, the bank acceptance was developed, a wider discount market was provided, the mobility of capital funds was increased, and greater elasticity, at least in expansion if not in contraction, in both note issue and deposit currency was secured.

Yet in one important respect the system failed to justify the hopes placed in it, at least by the more optimistic of its advocates. It did not prove equal to checking those forces generating the speculative activities that culminated in the stock market crash and great business depression starting in 1929. The faith that the system would prevent such developments was rudely shattered. The question how far the administration of the system or how far the limit of powers inherent in the system can reasonably be held in some measure responsible for this failure has aroused much controversy. That some of its underlying causes, including many of those arising out of the war and nearly all those originating in general world conditions, were beyond any control of the Federal reserve authorities is obvious. On the other hand it is clear that the lower standards, from

the point of view of commercial banking, permitted to national banks under the Federal reserve system in its effort to enable them to compete on more even terms with state banks, had unfortunate consequences. Further, the reserve bank authorities did not exercise even such control as the actual situation allowed to prevent the undue expansion of bank credit that greatly aggravated these consequences.

The actual course of developments in banking under the Federal reserve system during these postwar years brought certain striking changes, some of a character that had hardly been anticipated. Among the more immediate developments the large net inflow of gold, greatly augmenting the already excessive supply in the country, proved to be one of the most disturbing factors. As it flowed into the banks it was increasingly used as backing for the Federal reserve notes instead of short term commercial paper so that the volume of notes outstanding became less responsive to the needs of trade. Also, as it added to these reserves, it greatly increased the possibilities for expanding bank credit. This put pressure on the banks to increase either their loans or their investments, thus ensuring an easy money market, and impaired the power of the reserve banks to check the expansion of credit.

Since the demand for commercial loans showed little tendency to increase in the period 1921-1929, the funds of member banks were diverted to other channels and their loans on securities more than doubled; those on urban real estate more than tripled during these years, this increase being stimulated by a further modification of the law in 1927. The result was a marked alteration in the general character of the banks' assets and a much larger proportion came to consist of a type that was neither liquid nor readily shiftable without serious losses in a period of reaction. It was commonly the large percentage of assets of this type, too often based on speculative valuations, that proved disastrous for so many banks in the following depression.

Another disappointing development of these years was the relatively large number of bank failures that occurred, even before the wholesale collapse after 1929. In the six years following 1923 nearly 4,300 banks failed, of which 550 were national banks. The average for the latter group of 91 failures a year offers a sad comparison with the average of 11 a year for the period 1863-1913 before the Federal reserve system went into effect. Of the total failures by far the largest proportion consisted of small banks, a group severely hit by the continued agricultural depression as well as by the loss of business to larger institutions in more populous centers as the use of automobiles spread. One outcome was a reduction of about one-sixth in the total number of banks in the country as compared with the peak reached in 1922, though consolidations played a minor part in this. Another outcome was a decided increase in the average

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size of banks for, despite this decline in numbers, the total assets of all banks increased almost one-half during these years.

Another hope in which friends of the reserve system had indulged was destined to disappointment. There were relatively few state banks and trust companies that chose to shift their status and become national banks; there were also some national banks that withdrew from that system and took out state charters. As a result any increased centralization of the banking system which it had been thought might result from a general shift of state banks to national banks thus failed to materialize. On the other hand, there did appear in time an appreciable movement on the part of state banks to become members of the reserve system while still retaining their status as state institutions, and this entailed some measure of greater centralization.

During the first two years of the reserve system relatively few state institutions seemed ready to take even this step, though about half of them were operating under conditions that made them eligible. As time passed, some doubts were removed by making clearer the administrative policies and regulations to be adopted, and in 1917 an amending act provided various changes specifically designed to make membership in the system more attractive to state institutions and some of the states also passed laws to facilitate their joining. The entrance of the United States into the war was also made the occasion for actively urging such action on the patriotic ground that it would further a more effective mobilization of the country's banking resources. Thus stimulated the membership of state banks and trust companies rapidly rose up to a peak in the middle of 1922, when over 1,600 were enrolled with resources of over \$11 billion. At this time there still remained nearly 9,700 eligible nonmembers with slightly greater resources. As these figures indicate, relatively large banks made up a goodly proportion of the state institutions that elected to become members of the system. At this same time there were over 8,000 national banks in the system with resources of \$20.7 billion. The result was that at this date, although the total membership of the system included less than one-third of all the banks in the country, they possessed almost two-thirds of our banking resources. In the years immediately following there appeared some tendency for national banks to shift to state charters with the result that by 1929 the national banks held somewhat less than two-fifths of the total bank assets. Since most of the larger banks making this shift still chose to retain membership in the reserve system, the proportion of assets held by member banks remained about two-thirds of the total.

A tendency toward concentration of a minor character appeared during this period in the growth of branch banking. In striking contrast with the situation in many other countries such banking had theretofore

attained no enduring growth in the United States. Such signs of growth as had appeared in a few of the states before 1860 practically disappeared thereafter; only since about 1900 has there been any indication of a revival. Thus far the growth of branch banks has been chiefly confined to state institutions and even there to only a few of the states that definitely permit the establishment of branches, notably California, New York, Michigan, and Ohio. The Banking Act of 1927 authorized national banks located in states permitting branches to establish them in their own town or city, though a few converted state banks already had them. After that the number of national banks having branches rose from 118 to nearly 200 in 1938, the number of branches at the latter date being almost 1,600. Very few banks have found it profitable to maintain the foreign branches permitted by the act of 1913 and recently less than a dozen had a total of about 200 such branches.

It is claimed that through a system of branch banking increased strength, greater efficiency, and better management can be secured for the banks in small localities. The opposition to branch banking has come chiefly from the smaller banks which fear the competition they would have to face, but it is also based in part on the traditional opposition to centralization of banking power. The development, especially during the twenties, of so-called "chains" of banks where control is exercised through a company or group of individuals owning stock in different banks, though less desirable, has a similar concentrating tendency. The recent depression has dealt the chains a serious blow.

The Banking System and the Depression. When the stock market crash in the autumn of 1929 was followed by three years during which not only stocks and bonds continued to decline but commodity prices experienced a severe drop and depression spread throughout the country, the situation of the banks became desperate. Over 5,000 of them failed during these three years; in 1933 another 1,000 went under before the bank holiday was declared on March 5; 2,600 more did not reopen at the end of the holiday. These failures involved over \$5 billion of deposits and reduced the total number of banks in the country to less than 15,000 or about half the number in 1922. As failures mounted and alarmed depositors withdrew their funds for hoarding, the government sought to provide various forms of assistance to the banks.

The Reconstruction Finance Corporation, organized in 1932, advanced money to distressed banks, either as loans or by purchase of newly created preferred stock; the Banking Act of February, 1932, allowed Federal securities to be used as collateral for Federal reserve notes and made possible an expansion of bank credit and the circulating medium, as well as large purchases of government securities by the reserve banks to help relieve the money market. Despite all efforts, it proved impossible to

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allay the growing alarm of depositors and when, in the middle of February, 1933, the Governor of Michigan declared an eight-day bank holiday in the hope of stopping the run on the banks depositors everywhere became panic-stricken and similar action had to be taken in other states. When President Roosevelt took office on Mar. 4, scarcely any banks remained in full operation. No such complete paralysis of the banking system had occurred since before the Civil War. Although no system could be expected to meet such a strain as was placed upon the banks of the country at this time, it is clear the fundamental fault consisted in allowing the banks to get into a condition such as to create a general fear as to their solvency.

No other administration has ever come into office in this country at the moment of such an acute economic crisis. The action taken was prompt, vigorous, and on the whole remarkably successful, in view of the circumstances. The President immediately proclaimed a bank holiday which lasted for most until Mar. 15, when all solvent banks, about 13,000, were licensed to reopen; some 4,200 with about \$4 billion of deposits were placed under Federal conservators or state receivers. Meanwhile Congress passed the Emergency Banking Act which ratified the bank holiday, authorized the issue of Federal reserve bank notes against government obligations and certain other assets, allowed the Treasury to call in all gold, and made provisions for extending aid to banks by loans or the purchase of an issue of their preferred stock and for the reorganization or liquidation of closed banks.

This series of measures undoubtedly prevented enormous needless losses. Public confidence in the banks allowed to reopen was quickly restored and money that had been withdrawn for hoarding—estimated at from \$1 to \$2 billion—was returned to the banks. Such restrictions as had been imposed on the business of the reopened banks were soon removed and the closed banks were either reorganized or liquidated in a manner to minimize the losses involved. The thoroughness with which this purge of the banks was carried out is indicated by the small number of failures in the years that followed, the annual average being less than 50, of which less than half a dozen were members of the reserve system.

The weaknesses in the banking system so vividly impressed upon the country by the experience of these years led to new legislation designed to provide at least some of the needed reforms. The first of the new laws, the Banking Act of June, 1933, sought to divorce commercial and investment banking by forbidding member banks to engage in investment banking or trust operations, either directly or indirectly through affiliates. It also prohibited the payment of interest on demand deposits, opened membership in the system to industrial and savings banks, authorized branches in states where such were allowed, set up checks on loans for

speculation in securities, commodities, or real estate, abolished the double liability on future issues of national bank stock, and initiated a system for a limited guarantee of deposits. This law was later supplemented by the Banking Act of 1935 which was devoted largely to detailed regulations for carrying out the previous legislation.

In place of the Federal Reserve Board a new Board of Governors was put at the head of the reserve system and an Open Market Committee dominated by this board was given control of the open-market operations of the banks, and the purchase of government securities by the reserve banks was limited to open-market operations. A particularly important change gave the board power to raise the reserve requirements up to double the existing percentages, thus further strengthening its control over credit. A more questionable provision increased the power of national banks to make real-estate loans.

This act also gave more permanent shape to the regulations governing the Federal Deposit Insurance Corporation. Under these regulations all member banks in the reserve system are required to enter the corporation and qualified nonmember banks may. After July 1, 1942, state nonmember banks with deposits exceeding \$1 million will be excluded. The maximum insurance provided for any one depositor is \$5,000 and the insurance fund is built up by assessing the banks on the basis of their deposits. The supervisory rights of the corporation over the practices of banks having insurance status, together with the authority to admit or to expel banks from this status, can obviously be made a very powerful instrument for enforcing a high standard of banking. Much will depend upon the wisdom with which the authority is exercised, since the strongest argument against any guarantee of bank deposits is that it tends to encourage lax banking practices.

The result of these various measures has been to give the Federal reserve authorities considerably greater control over the use of bank credit; sufficient control, it is claimed, to prevent any such abuses as developed during the decade of the twenties, despite the difficulties arising from a dual system of banks. But the system is still one where successful operation depends very largely upon the wisdom of those in authority. Whether that will prove more nearly equal to the problems that may arise than was the case during the decade of the twenties only time can reveal.

In the years immediately following 1933 the chief problem was created by the great influx of gold and the resultant rise in the excess reserves of the banks. To lessen the consequent danger of credit expansion the recently granted power to increase the legal reserve requirements was employed to the limit; those requirements were doubled between August, 1936, and January, 1937. This resource having been exhausted, when gold

continued to flow in, it became necessary to resort to measures for sterilizing the incoming gold to keep it out of the banks' legal reserves, at least for the time being. To guard against the potential inflationary effects of this great increase in our stock of gold remains one of the serious problems that the banking system still faces. In the meantime the banks found the chief outlet for new investments in the government securities issued to meet the steadily recurring annual deficits of the Treasury. Even then the surplus of lendable funds held by the banks was such that interest rates fell to the lowest point in our history, though in the absence of more favorable prospects for profits this proved insufficient to stimulate any considerable business recovery.

CHAPTER XL

FINANCIAL INSTITUTIONS SINCE 1860.—(*Continued*)

Agricultural Credit Institutions. It has previously been pointed out that the banking systems of the country as they developed during the nineteenth century had been signally deficient in providing for the financial needs of agriculture. These needs had been stressed once more in the discussion of the reorganization of the country's banking system, but the depression of 1920-1921 which, after the speculative wartime boom had hit agriculture with great severity, occasioned a renewed cry for further aid that became still more clamorous after 1929. In fact the farmers' demand for relief at this time in many ways resembled the previous agrarian movements in times of depression; on this occasion, however, there was relatively more stress on cheap and easy agricultural credit than on cheap money. All this resulted in a series of laws more specifically providing for these needs than any previous legislation.

The provisions of the Federal reserve system had marked some advance in permitting the rediscount of short-term paper based on agricultural transactions and by allowing national banks to carry a limited amount of mortgage loans. But the farming interests claimed that still more was required and in 1916 secured the passage of the Federal Farm Loan Act designed to set up a separate system of Federal banks to provide for the financing of farm mortgages. Under this law a Federal Land Bank was created in each of twelve districts into which the country was divided. The general administration of the system was placed in the hands of a Federal Farm Loan Board. The capital of each bank—not less than \$750,000—to be subscribed by the public or the government was in fact mostly provided by the latter. Farmers wishing to borrow on mortgages were required in groups of ten or more to organize National Farm Loan Associations which turned the mortgages over to the land banks. The latter then used them as security for tax-exempt bonds which they issued and sold to the public. In spite of the rather complicated difficulties in organizing these associations, the outstanding loans so secured rose to over \$1 billion by 1925.

The law also provided a simpler method through permitting private individuals to organize Joint-Stock Land Banks that could deal directly with the individual farmer. These banks at this period took mortgages

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to about half the total taken by the Federal banks, but their management proved less conservative and many subsequently failed. In 1933 the making of new loans by these banks was stopped and measures for winding up their business were adopted. The fact that by far the greater portion of the loans obtained through both institutions was used to pay off previously existing mortgages indicates that the farmers thus secured a chance to borrow on more favorable terms than would otherwise have been possible.

Although the act of 1916 provided for long-time farm mortgage loans, and the Federal Reserve Act for certain short-time loans, the need for those of moderate length of time was provided only by the Agricultural Credit Act of 1923. This created twelve Federal Intermediate Credit Banks to make loans on, and to rediscount, agricultural and livestock paper presented by banks, cattle loan companies, and like institutions for periods of six months to three years. The capital was provided by the government. Provision was also made for private organizations of a similar type, called National Agricultural Credit Associations, to deal directly with the public. Thus far only moderate use has been made of the facilities provided through the Intermediate Credit Banks, their total of outstanding loans and discounts having always remained under \$200 million until 1937 when the total more than doubled, chiefly owing to increased loans to production credit associations. The act of 1923 also raised the limit of Federal farm bank loans to an individual borrower from \$10,000 to \$25,000 and amended the Reserve Act to make farm paper of nine months' maturity eligible and to permit reserve banks to discount paper and buy debentures from the Intermediate Credit Banks.

After the depression of 1929 set in and the prices of agricultural products experienced another sharp decline, placing a very large group of farmers in a desperate financial plight, it was obvious that additional farm credit was urgently needed. The attempt to provide some assistance under the acts of 1929 and 1932 had proved hopelessly inadequate. The new administration which came into power in 1933 promptly adopted legislation making possible a vast increase in agricultural credit and providing for a more effective coordination of the various lending agencies. This legislation established the Farm Credit Administration as the head of a coordinated system under which four groups of permanent lending institutions were to operate: the former Federal Land Banks and the Federal Intermediate Credit Banks together with the newly created Production Credit Corporations and the Banks for Cooperatives. One institution of each type was located in each of the twelve districts into which the country was divided. One commissioner for each set of banks together with a governor and two deputy governors constituted the administration, which also supervised certain other matters such as crop, feed, and

drought relief loans, the revolving fund of the act of 1929, and the Federal Credit Unions.

The new Production Credit Corporations take stock in and supervise local discounting agencies known as production credit associations making loans for current production requirements; the new Banks for Cooperatives extend commodity, operating capital, and facility loans to farmers' cooperatives. As a supplement, on easier terms, to the loans obtainable through Federal Land Banks temporary provisions, since extended to 1942, was made for what were called Land Bank Commissioner loans which have been extensively employed. In 1933 the temporary Commodity Corporation Credit was created. In 1934 the Federal Farm Mortgage Corporation was set up and subsequently extended and authorized to issue up to \$2 billion of guaranteed bonds that it could exchange for land bank bonds, which the market had not been able to absorb, or to invest directly in mortgages. Also, it could make loans on staple commodities in connection with the adjustment or marketing programs of the AAA. Other new forms of farm credit such as those provided under the Farm Security Administration or for rural electrification have been previously noted.

It is obvious from the rapidity with which the farming class took advantage of this recent legislation that it has been of the greatest value to them in helping to meet the financial problems of the prolonged depression. The permanent organizations set up are such that in the future there can be little cause for complaint that the credit needs of agriculture are not fairly provided for. In fact, during the depression years, the actual provision not infrequently went beyond the point that could be justified purely on the principles of sound finance and might well be considered as an indirect form of public relief. The main outcome, beyond helping to carry farmers during the depression, has been the transfer to Federal agencies of a large portion of the farm mortgage debt—some 40 per cent by 1940—and a very substantial reduction in the terms on which it was borrowed. Of the total of \$3.3 billion of loans and discounts outstanding under the Farm Credit Administration at the opening of 1938, nearly \$2.85 billion was made up of long-term mortgage loans obtained from the land banks or the Land Bank Commissioner; about four-fifths of the loans obtained from these sources had been used to refinance mortgages, and to some extent, other debts. The rate on land bank loans, which had varied between 5 and 6 per cent from 1917 through 1934, was subsequently cut to 4 per cent and easier terms for repayment of the principal than had commonly been available further eased the burden for the borrower.

There can be no question but that the series of banking acts from 1913 on, whatever their defects of detail, did make a much needed ad-

vance in the provision for the financial needs of agriculture. For the first time there was a group of large banks with the definitely specialized function of providing for these needs. The farmer was no longer so dependent upon commercial banks, the essential functions of which were scarcely consistent with extending long-time farm loans. Nor was the farmer so dependent upon the small individual farm mortgage brokers with their more limited access to the sources of lendable funds of insurance companies, other corporate investors, or private individuals. Through a larger and better organized market for agricultural loans long, intermediate, and short time, increased mobility in the flow of the whole country's supply of capital to this economic activity was ensured and with that there was to be expected not only a lessening of the disparity between borrowing costs in different sections of the country but also a lower average of these costs.

That this lower cost was in part due to the use of government credit and certain tax-exemption privileges which might be deemed class favoritism is true; but all economic legislation benefits some group and, even among that marked by an element of government subsidy, there are not many instances where the benefit is so widely diffused or better justified than this. The assertion sometimes made that, at least in the period just preceding the depression of 1920, agriculture had been given too much rather than too little credit is probably correct, and the danger that this may be repeated is something that recent developments make only too evident. In the long run the farmers might have suffered less had greater limitation of credit put some check on the speculative activities of the time. But the same could be said of other activities as well. The fact that credit can be abused and so needs to be safeguarded does not imply that an organization designed to make it more generally and economically available is not desirable. Fundamentally this was what the new agricultural credit legislation sought to do, however imperfect in its details, for it was directed toward overcoming the relatively disadvantageous borrowing position in which the typical American farmer found himself owing to his isolation, his lack of resources, and his individualistic, small-scale enterprise.

The Growth of Dealers in Securities. As capital increased so greatly in volume and importance and as the corporate form of organization grew in popularity after 1860, it was inevitable that the business of dealing in the rapidly mounting volume of securities of all sorts that was put out to obtain the needed capital—in the peak year of 1929 this rose to over \$10 billion—should expand accordingly. This expansion in turn made economically possible the development of various highly specialized institutions for carrying on this work and thus ensured a more efficient security marketing organization.

Although we still have much to find out about the development of the more specialized investment concerns, it seems clear that the bond house was the most important of the earlier types and its growth was greatly stimulated by the enormous sale of government and state bonds during the Civil War. Subsequently there was added to the outstanding supply of these bonds the output of municipal and other minor political units which steadily mounted as public activities expanded. Next in importance in the issue of bonds were the railroads and their rapid expansion for three decades after the war greatly augmented the supply. Until near the close of the century the use of bonds by other lines of business remained relatively small and their sales were rather localized; but thereafter industrial, public utility, and numerous other types of issues mounted rapidly and found a national market.

Previous to 1860 such bond issues as were not sold direct to investors were generally disposed of through the medium of private banking concerns doing a heterogeneous financial business. Such concerns have continued to handle much of this work ever since. Among them were the foreign banking houses or those with foreign connections through which American securities were sold abroad—a small though important group, whose activities were considerably expanded in the period following the Civil War. There also arose a group of more specialized firms tending to confine their activities to the purchase of the better grade of bonds from the issuer and their sale to corporate and private investors. Not infrequently these houses came to specialize in only one class of bonds such as government and municipal, railroad, or public utility.

By the twentieth century, when the high price of urban land and the enormous buildings erected thereon came to require an investment much larger than could be easily financed by a simple real-estate mortgage, the loan was divided into small units through the issue of bonds secured by a mortgage. By 1931 it was estimated that around \$10 billion of such bonds were outstanding. Thus arose another group of dealers specializing in real-estate bonds, though the market for such issues was ordinarily a local one.

Some bond houses, on the other hand, tended to broaden out their activities to include a wide range of stocks, especially from the close of the nineteenth century when the output of industrial, public utility, and other classes of stock began to rise very rapidly. Such concerns became the investment bankers of the more comprehensive type to which large corporations increasingly turned to dispose of their security issues. Individually or, if the issue was large, in groups organized as a syndicate, these bankers were prepared to underwrite an issue so that the corporation could be certain that the needed funds would be available when required. Through an extensive clientele, often aided by branches or

correspondents scattered over the country, the bankers provided a broad market, frequently national in scope, in which to dispose of such issues.

Thus there was evolved in time a somewhat hierarchical system of investment bankers. At the top stood a few powerful groups which individually or as syndicate managers controlled the marketing of most large issues. The origination of smaller issues might be undertaken by less important houses; a host of others, seldom or never originating issues, engaged chiefly in their distribution. The rapid growth of this business often yielded large profits and the larger commercial banks frequently organized, or affiliated with, an investment house to obtain a share of it.

The commercial paper houses constitute another type of distributor that arose toward the latter part of this period. Evolving out of the note brokers of earlier years, they became the medium through which such fairly large concerns as made much use of short-time paper could dispose of it to others, largely banks, that sought this type of temporary investment. Still more recently with the expansion of installment selling a specialized finance corporation has been developed to take over paper thus arising. A somewhat similar service has been provided by concerns that will advance money on business accounts receivable. An entirely separate group was made up of the promoters of the highly speculative, if not purely fraudulent, enterprises that found their own clientele in the ignorant or "sucker" classes and succeeded in mulcting this credulous public of sums estimated to total several hundred millions annually.

The functions performed by the regular investment banking houses are both varied and important. Houses of original purchase can give valuable advice to corporations or governmental agencies as to the provisions and conditions under which securities can best be issued. They can guarantee that the issuer will get the funds when needed so that definite plans can be made accordingly. Specializing in the business and being in contact with a large clientele, they can ordinarily handle the distribution of an issue of any size more efficiently than could the issuer. Their investigation into the business and legal aspects to determine the probable soundness of any issue, being made by a group of experts, though subject to errors of judgment, has the double advantage of setting up some safeguards as a protection for the ultimate purchaser of the security and of helping to direct the flow of capital into lines where it will prove most productive. Because too many have failed to perform this function efficiently, more governmental regulation of the business has been found necessary.

The Expansion of Stock Exchanges. Another important part of the organization for the marketing of securities is provided through the stock exchanges; with the growing volume of securities that sought a wide market their business expanded accordingly. Government, state, or

municipal bonds and railroad stocks and bonds continued to be the chief classes of securities dealt in until about 1900. Thereafter industrial and public utility issues in time took the lead. Still other classes made their appearance including, since the outbreak of the first World War, various foreign issues, both public and private. New exchanges, sometimes more than one, were organized in all the important financial centers, though their dealings were confined largely to local issues. The New York Stock Exchange, however, easily retained its position of predominance, its volume of business far exceeding the total of all others combined. At the beginning of 1931 nearly 3,000 separate issues of stocks and bonds were listed there with a total market value of about \$100 billion. During the peak year of its activity, 1929, over 1 billion shares of stock together with bonds valued at almost \$3 billion were sold in this exchange alone. In scale of operations, elaborateness, and technical efficiency, no other organized market in the world can compare with it.

As to the function of this institution in our present economic order little need be added, for it provides the advantages inherent in any highly organized market. By maintaining a large and ever open market for securities it increases the mobility and liquidity of capital. By providing the maximum of free play for buying and selling operations it furthers the quick adjustment of values to changing conditions, and though this process has not been freed from the disturbing effects of much speculative manipulation, the regulations of the exchange have shown progress in this direction. Regulations on other points, particularly those concerning the listing of securities, reflected a slowly growing sense of social responsibility on the part of the exchange and provided better safeguards for security owners, yet fell far short of what was needed.

Aids and Safeguards for Investors. The growing volume of security issues naturally implied a rapidly increasing group of individuals investing in them. The enormously widened variety in the choice of securities thus made available for the investor has given him greater opportunity to select those best fitted to meet his individual needs. At the same time the problem of selection has been made more difficult and the ability of the average investor to choose wisely—never great—has failed to show a corresponding improvement. A few developments in the activities of financial institutions, designed to meet this growing need, have already been mentioned but others of importance remain to be noted.

Whereas banks of nearly every type have always been one of the chief aids for those seeking investment advice, their service of this kind has been greatly expanded and improved within the last quarter century. Quite recently there has sprung up the new profession of investment counselor to provide such service. Equally recent, as far as this country goes, is the investment trust, first employed on a wide scale in the specu-

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lative boom that ended in 1929. Organized at such a period, lacking experience, too often employed only as another device to get control of other people's money to be used for some promoter's personal gain, and not subject to adequate control, many proved to be most unfortunate for the investor. With their defects eliminated it is clear such trusts can be very serviceable.

The great increase in the mass of printed material—newspapers, journals, manuals, and specialized services—has proved valuable in providing both factual data and analytical studies. Sounder accounting practice has also been of aid. In the effort to provide some safeguards against the output of highly speculative or fraudulent securities nearly all the states have passed so-called “blue-sky laws,” though with only moderately successful results. An attack upon the lax corporation laws that commonly provide the legal basis of such schemes might prove more fruitful. More fundamental still is the task of educating the ignorant investor, at least to the point where he will secure competent advice. Thus the waste of capital arising from its diversion into impracticable enterprises might be lessened, and, in the case of purely fraudulent schemes, the suffering caused by the shift of hard-earned wealth from the ignorant investor or grasping speculator to the parasitic promoter or sharper could be prevented. The work of the SEC is directed toward some of these evils, as previously noted; but it will require still broader powers and an attack upon lax incorporation laws to accomplish what is needed.

Building and Loan Associations. Though the first of the building and loan associations in this country dates back to 1831, but few had been organized before 1860. It was not until the eighties that even moderate growth began and the era of great expansion did not set in until 1920. By 1930 the membership in the nearly 12,000 associations had risen to over 12 million and the total assets to almost \$9 billion; since the depression these figures have been considerably reduced. Such growth clearly betokens a useful function being performed. It is perhaps the more remarkable in having occurred in a country where undertakings of a cooperative character—and these may at least be considered semicooperative in essence—have seldom proved very successful. Though widely scattered over the country, the greatest growth has occurred in the Middle Atlantic and North Central states. Providing a stimulus to saving and facilitating the economical building and ownership of moderate priced homes are services of social as well as economic significance.

Developments in the Field of Insurance. As we have already seen, insurance in its various forms had attained but moderate growth in this country by 1860. At that period fire and marine insurance were widely used but life insurance, though readily available, was little employed and other forms of insurance were seldom even available. The expansion, not

only in its forms but also in the variety of risks against which insurance could be procured, along with the increased resort to insurance, are among the outstanding developments of our financial institutions during the period that ensued.

Life Insurance. It was in the field of life insurance in its various forms that the most remarkable growth was destined to take place in this period. The first impetus came during the decade of the Civil War by the end of which the outstanding insurance had increased 1,200 per cent. For the first time life insurance seemed to be making an appeal to the masses, one doubtless stimulated by the more aggressive methods of the many new companies, the more attractive policies, and especially the high remuneration to agents introduced at the time; such a percentage rate of growth has never since been even approached. In fact the following decade brought a very considerable decrease in the business. The extravagant expenditures, the actuarially unsound methods employed, and the fraudulent character of some promotions resulted in the failure of many companies. It is clearly shown that here was a business where keen unregulated competition was fraught with an unusual degree of danger to the public interest. This experience also led to reforms in actuarial methods and otherwise, aided by stricter state regulation.

Thereupon a steadier growth ensued, for in each of the three decades after 1880 the amount of outstanding ordinary life policies practically doubled. As relatively few new companies entered the field until after 1900, some of the older companies attained great size. In certain of these serious financial abuses developed which were brought to light through a New York investigation in 1905 and led to another movement for stricter state regulation. In the two decades beginning in 1910 the amount of ordinary life policies outstanding rose from \$13 billion to nearly \$90 billion. Although the decade of the twenties brought a phenomenal rate of growth in life insurance, this was followed by a slight decline during the worst of the depression. By the opening of 1940 the life insurance in force, including industrial policies, had reached a new peak around \$124 billion. This was equal to about \$960 per capita in striking contrast with the estimate of less than \$6 per capita for 1860.

The character of life-insurance policies was greatly improved during this period, not only by measures calculated to ensure their safety but also by a growing variation in the forms of policies and types of insurance made available, thus better serving the particular needs of different individuals. Significant because of the large numbers concerned was the rise of industrial insurance, designed primarily to provide the wage-earning class with funds to meet expenses of the last illness and burial. First made available in 1875, the number of such policies outstanding rose to 90 million in 1930—about three times that for ordinary life policies—and

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carried \$18 billion of insurance. This business is highly concentrated in a few great companies.

A somewhat similar need of more skilled workmen and others was met by the contemporaneous growth of fraternal insurance. The history of these orders, where the spirit of fraternal cooperation is so important, has been a checkered one. The assessments, rather than fixed premium payments, upon which they generally depended, were often inadequate and the management was sometimes shortsighted and unskillful, though improved in recent years. For the last 30 years they have experienced no enduring growth, the peak in the number of certificates outstanding, reached in 1929, being under 9 million, and the known amount of

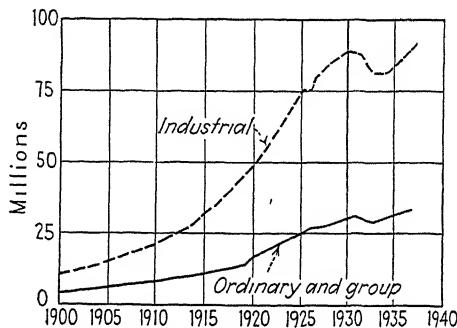


FIG. 74.—Life insurance policies in force since 1900.

insurance in force at present—some \$6 billion—is a third lower than in 1910.

In quite recent years, however, the most remarkable development of insurance designed for the masses has been that of group insurance. Under this system an employing concern secures a blanket policy covering large groups or all of its employees. The insurance may be against accident or disability as well as death and the amount generally varies from \$250 to \$5,000. The cost, which is borne by the employer, or in part by the employee, is very low. This is made possible by the economies in wholesale selling, by the general waiving of medical examinations, which has the added advantage of providing insurance for some who could not otherwise secure it, and by other savings.

The development of insurance against losses arising from accident, ill health, and similar causes has occurred entirely in the period since 1860. Although certain of the organizations chiefly concerned in life insurance also provide against some of these risks, most of the business is carried on by specialized companies. The first American company organized to sell accident insurance was formed in 1863. For a considerable time growth was slow, but the business eventually attained large proportions. The

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more specialized business of providing against losses from industrial accidents is largely a growth of the twentieth century, in which state legislation requiring such provision has been an important factor.

Provision for health insurance in this country really began in the twentieth century. At first confined to illness arising from only a few diseases, its scope has subsequently been greatly enlarged. At the same period many companies began to include general disability clauses in their life-insurance policies. Old age and unemployment are two forms of risk against which the country was relatively backward in providing. Such as existed before the recent Social Security Act sought to remedy this deficiency, as described in an earlier chapter, was mostly in the form

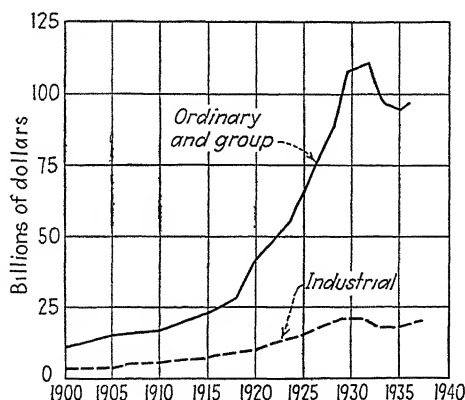


FIG. 75.—Amount of life insurance in force since 1900.

of pension systems established by individual employers or the government. Outside of a very few private concerns there was no provision against unemployment.

Property Insurance. Though protection against fire continued to be the most important form of property insurance, the record of its development during this period affords less of the spectacular than that of most branches of the business. As the fundamental importance of safeguarding property against fire losses had become generally recognized before 1860, the growth of fire insurance since then has been uneventful and steady, largely determined by the constant increase in the amount of insurable property. Generally the amount of risks covered somewhat less than doubled each decade. As the number of companies grew much more slowly, the average size increased markedly and this ensured much greater strength. In this field foreign companies, though of minor importance, have been more of a factor than in the life field.

In the field of marine insurance, on the other hand, the prevailing tendencies during this period were quite the reverse. The most prosperous

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period of American marine insurance ended with the outbreak of the Civil War. Thereafter, with the steady decline in American shipping engaged in foreign trade and the increasingly keen competition of the strongly entrenched British companies for American business, the domestic companies, most of which were primarily interested in fire insurance, declined in relative importance so that the larger and more specialized foreign concerns tended to dominate the field.

The more significant developments in the field of property insurance during these years consisted in the increasing variety of risks against which insurance was being made available, mostly through rather specialized concerns. The first American corporation to engage in the fidelity business was organized in 1875. At first, confined to only a few classes, growth of the business was slow. As later extended to include the provision of surety or fidelity bonds for court undertakings, contractors, fiduciaries, public officials, etc. the business has rapidly expanded in more recent years. Formerly such bonds had been given by private individuals who could seldom take adequate precautions in the matter and whose financial responsibility was apt to prove uncertain. The substitution of strong, carefully managed corporations in place of the individual naturally greatly increased the desirability of the service rendered as well as the efficiency with which the function was performed.

In the field of real estate, risks arising from uncertainty of title can now be met through the growth of title insurance companies whose activities have greatly added to the security of real-estate operations. For the farmer hail, tornado, and livestock insurance have been made available, and recently the government has provided wheat crop insurance. Other property risks against which insurance has become obtainable are too numerous to cover even by listing, but the mention of burglary, credit, automobile, aviation, plate glass, explosion, steam boiler, riot, and rain will suggest the variety of types.

We have previously noted that the main function performed by insurance in our economic order is to distribute the losses arising from various risks over a large group of individuals in an equitable manner so that the burden is easily borne. Greater security and increased stability, both for the home and for business, are thus ensured. Through loans secured by life insurance or by property insured against varied risks, opportunities to obtain credit hitherto unavailable are opened. Through life insurance, the spirit of thrift is fostered so that this has become one of the important sources of additions to the capital and wealth of the nation. Through the activities of the insurance companies in setting up higher standards and requirements or by instructing the policy holders—activities greatly expanded in recent years—the actual losses in many fields of risk have been reduced. Finally, by the development of a better actuarial basis and

sounder business methods on the part of the companies, furthered by more adequate regulation from the states, a more efficient performance of these various functions is secured. Bearing these points in mind, we can better appreciate the significance of the unusual expansion in both volume and variety of forms of insurance that took place in this period.

Capital and Its Accumulation. The underlying factors that determine the growth in the supply of capital have been previously explained; it will suffice here to note the outstanding developments during this period as they affected one or another of these factors. How the growth in the fundamental factor, the savable fund, was promoted by the innumerable improvements in the technological processes of production and by the more efficient organization of industrial society must already be apparent, for this theme has constantly recurred in preceding chapters. Never before in all history had the application of the achievements in science and invention yielded such results in the production of wealth as were attained in the United States during this period. The gain from the development of new, and the better control of the old, institutional components of the general economic organization was also great, though partially offset by mistakes in the use of the new devices and the difficulties arising from the growing complexity of the mechanism, notably that group of maladjustments that causes the business cycle.

It has been estimated that between 1900 and 1929 alone the per capita national income, after correcting for price changes, increased 38 per cent; another estimate puts the figure for 1929 at something over twice that for 1860. Out of this the people deducted an increasing amount for purposes of consumption—a proportion that became so large as to provide the highest standard of living for any great nation that the world had ever known. Yet the amount that remained from the savable fund rose to sums also unequalled in the history of nations, whether measured by the absolute or by the per capita figure.

For the more recent period we have several estimates as to annual savings and net capital gains which may be accepted as giving an approximately correct impression of the situation. The National Resources Committee estimates that for 1935–1936 the net savings of the income of all consumers amounted to almost \$6 billion or 10 per cent of the income received. This was a product of some \$7.5 billion of savings by the group receiving \$1,250 or more income less the excess of expenditures over income of some \$1.5 billion in the group with a lower income. The former group, it should be noted, contained only 41 per cent of all individual or family consumer units but, taken as a group, did all the private saving. Moreover, of the total saved by this group, over \$3.5 billion was saved by consumer units having an income of \$10,000 and over and something over \$1 billion each by the three classes receiving incomes of \$2,000–\$3,000,

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\$3,000–\$5,000, and \$5,000–\$10,000. Thus most private saving is made by a relatively small group.¹

Much the greater portion of these private savings may be assumed to have gone into either new investments or life insurance² and about a sixth was added to savings bank deposits; probably a smaller proportion went into homes. In addition, there are the private savings made by corporations that retain their earnings in their business. In the prosperous years 1922–1929, according to income tax returns, these averaged over \$2 billion a year; during the next six years the average loss was more than twice this amount. Still another form of nonprivate saving which has come to attain marked importance, especially since the depression, is that made by governmental agencies, represented by the net addition to durable public works and ultimately chiefly paid for out of tax receipts.

The most careful estimate of the volume of capital formation is that of Dr. Kuznets covering the years 1919–1935.³ This indicates a yearly average gross capital formation during this period, including changes in business inventories, of \$14 billion, out of which \$8.7 billion offset capital consumption, leaving \$5.3 billion as the annual net capital formation or 8.3 per cent of the gross national income. Of this net capital formation, over 43 per cent went into business, over 38 per cent was used by public agencies mostly for construction, and 8 per cent went for foreign investments. In addition some 10 per cent went for residential construction, an outlay, it may be noted, that would be classified under durable consumers' goods rather than under capital goods, as commonly employed in this book. The cumulative effects over a long period of years of such additions to our stock of capital goods upon the productive capacity of the country will be obvious.

Among the other factors that contributed to this steadily rising annual addition to the accumulated capital of the country several that were of particular significance during this period should be noted. The great advance in the education of the people and the desire to raise the standard of living, in part a product of the former, doubtless spread the spirit of thrift more broadly at the same time that they enhanced the amount people wished to save. The developments among financial institutions, previously described, provided greater security and far better facilities

¹ The Brookings Institution estimate of individual and family savings for the boom year 1929 was nearly \$18 billion, two-thirds of which was saved by those with incomes of \$10,000 or more.

² The cost of running life-insurance companies should be deducted from the premiums paid the companies to determine the *social* saving involved. For 1935–1936 the premiums paid, less this cost, averaged \$2.6 billion a year.

³ KUZNETS, S., "National Income and Capital Formation 1919–1935," National Bureau of Economic Research, New York, 1937.

for the investment of savings, and strengthened the willingness to save. Particularly notable was the recognition of the value of life insurance, which first became general during these years, and resulted in making this one of the large sources of saving. Another source that attained to great importance, chiefly in the last few decades, was the amount that corporations set aside out of earnings and retained in the business instead of paying out in dividends. Such corporate savings, though subject to great fluctuations, have been estimated at a fifth of the total annual savings of the country.

On the other hand, this period, unlike the preceding, was marked by the tremendous destruction of property incident to two great wars. In the Civil War, in addition to the diversion of economic resources to destructive purposes, there was the terrible devastation of the South. In the first World War, although we largely escaped the latter form of loss within the country, the diversion of our economic resources to destructive purposes elsewhere was on an unparalleled scale. How great an inroad upon the existing supply of capital goods in the country these wars entailed, to say nothing of the loss of the potential addition to that supply by the diversion of economic resources to destructive purposes, though unquestionably great, cannot be determined. A similar source of loss, from which the country had largely escaped up to the close of the nineteenth century, is the peacetime outlay for armament, which mounted rapidly thereafter. Yet, relative to our resources, this burden was light compared with that under which most European countries staggered.

The International Movement of Capital. In addition to the accumulation from domestic savings there was a rapidly mounting inflow of capital from Europe. This first attained large proportions in the period from the close of the Civil War up to the panic of 1873, at which time the total of foreign capital in the country is estimated to have been around \$1.5 billion. Most of this was invested in railroad and government bonds. Following some withdrawals during the depression, the inflow was resumed and by 1890 the total had risen to about twice that for 1873, railroads continuing to attract most of these funds. The monetary uncertainties and economic depression of the nineties again led to withdrawals, but the abounding prosperity that succeeded induced a new inflow up to the outbreak of the war in 1914, by which time the total had probably risen to \$5 to \$7 billion. In these latter years the range of investments became much more diversified; industrial and public utility securities in particular came into favor. These years also mark the first appreciable outflow of American capital into foreign countries, notably Canada and Latin America. The total, estimated as over \$600 million in 1900, had risen to over \$2 billion by 1914, thus somewhat offsetting the foreign investments here.

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With the outbreak of the first World War, however, the previously existing conditions underwent a complete change. Up to that time the United States had always been a debtor nation with a steadily rising inflow of foreign investments; before the war was over it had become a creditor country. During the first years of the war the United States bought back a large volume of the American securities owned abroad and also made extensive purchases of European government securities. Then, when the country entered the war, the government began a series of loans to the Allied countries, which finally rose to around \$10 billion, and brought the total to a figure far exceeding the foreign investments in this country.

But the outflow did not stop here. Following the return of peace, foreign countries, many of them suffering from depleted resources and seeking to rehabilitate their economic activities, turned to the United States as never before to secure capital. New York became a rival of London as the great market for placing international loans. While the accumulation of capital here was proceeding at a rapid rate, the domestic demand for capital arising from the preliminary process of opening up the vast resources of the country, which had been so great down to the opening of the twentieth century, had now declined in relative importance, though there was still a heavy demand from the expanding industrial and commercial life. As a result, the prospects of returns on capital invested in this country no longer so exceeded the prospect of returns on investments in other countries as to check the outflow. Though much the greater portion of these foreign investments went to the less developed countries, chiefly Latin America and Canada, it is significant that European countries also obtained a generous share—significant because it was from Europe that we had previously been borrowing. By the close of 1930 the total of private American foreign investments, including short-term credits, had risen to around \$17 billion, in addition to which there were the government loans of a par value of over \$11 billion. The total made up a sum that has never been equaled in any other country, though since then the amount of private foreign investments has been reduced.

This shift from being a debtor country to a position as the leading creditor country is significant of an important change in underlying economic conditions. From the very beginning of our history down to this shift, capital had been scarce in the United States as compared with the situation among the countries of western Europe. The scarcity of this factor of production had been of fundamental importance in its manifold reactions upon our economic history. For the future, as it now appears, the country no longer need face this handicap of relatively expensive capital. The change attains even greater significance because of the growing importance of capital among the factors of production. However the

effects are somewhat modified by the increased mobility in the flow of capital throughout the world which tends to equalize interest rates, except as risks arising from political uncertainties and growing governmental control have interfered.

The Control over Capital. The growing importance of capital, just alluded to, has also been significant because it has meant that those who owned capital or were in a position to control the flow of lendable funds came to exercise a greater power over the economic life and development of the country than ever before—a power not without reactions on political and social life as well. The growing number of bankers on the directorates of large corporations and the increasing influence of international bankers are illustrations of this tendency.

It has been stated sometimes that the concentration of control has gone so far as to create a “money trust.” Possibly there have been instances, when an unusually large amount of capital was required, where the combination of circumstances has been such as to enable some large banking group hostile to an enterprise to prevent the securing of the needed funds, just as there are cases where small loans sought by those with very limited access to the capital market have been refused by hostile interests. The great power of strong financial groups became an important feature in the economic life of the country during this period. Thus far, however, the vast volume of lendable funds and the mobility of their movement have prevented the development of any monopoly of the supply of capital.

Another development in the period since 1860, not without considerable significance, was the change in the regional distribution of the ownership of capital. Previous to 1860 such ownership had been largely concentrated in the Atlantic coast region, especially the North Atlantic states. The trans-Allegheny region, rapidly growing but relatively poor, had looked to the East for needed capital and was a debtor section as was also the South. Since 1860, though the North Atlantic states still lead in the concentration of wealth, the most marked alteration has occurred in the group of states that made up the old Northwest. The rapid industrial expansion here has resulted in an accumulation of capital which much more nearly meets the regional demands and also permits of lending to other sections. This region can no longer be considered a typical debtor section. The recovery of the South from the wartime devastation and its economic development since have appreciably decreased its dependence on outside capital. The trans-Mississippi region still remains for the most part a debtor region, its development being too recent to have provided a sufficient accumulation of capital for local needs.

Here also the situation is being modified. The period of abnormal demands for capital incident to the opening up of a region has passed. Local

enterprise, in so far as the profits do not go to Eastern owners or lenders, is steadily accumulating capital. Though agriculture is the basic activity, the accumulations from the other extractive industries have been important: mining in the earlier decades, lumbering, and, most notable of all, oil in more recent times. To these might be added the effects of the migration of many wealthy people to the coast. Thus slowly but steadily, the old debtor situation, characteristic of a rapidly developing new region and creating within the country a conflict of economic interests between it and the creditor regions, is passing away. Debtor and creditor groups still remain; but the conditions that developed a cleavage, further accentuated by the regional basis of representation in Congress and resulting in sectional conflicts that left many a mark on our history, are disappearing with the vanishing of the frontier.

Panics and the Business Cycle. The periodic ups and downs of business called the business cycle, which became such a striking feature of our economic history in the period before 1860, continued with unabated frequency and force in the period that followed. The most severe panics followed by several years of depression occurred in 1873 and 1893. An unusually prolonged depression, but unaccompanied by panic, started in 1929. Acute financial panics, though followed by only short depressions, occurred in 1884 and 1907, and both of the great wars falling within the period were shortly followed by brief depressions. Obviously little if any progress was being made in lessening this serious evil of the economic order.

Despite the careful studies of the phenomenon carried on in more recent years, much remains to be done before we obtain a fairly accurate analysis of the manifold factors underlying it, since it is clearly one of the most complex of economic problems. Judging from recent experience, little has been accomplished in taking action to lessen the evil. What our present knowledge indicates as among the important causes of the cycle was explained in Chap. XXV. We may now describe such developments affecting these causes as were significant during the period under review.

That the business cycle is primarily a product of certain characteristics of modern capitalistic industry is generally agreed. Preceding chapters have shown how rapidly, during these years, the economic life of the country was being transformed so that by the twentieth century capitalistic industry appears to have attained full bloom. Among the characteristics especially significant in relation to the business cycle is the extensive use of credit. Previous to 1860 state bank notes had been one of the chief devices for expanding credit and one which more than any other had caused trouble through reckless use. This source of trouble was eliminated after the Civil War. The subsequent growth of bank credit in the form of deposit currency together with the development of many new devices

for creating credit in one form or another, not to mention the effects of the Federal reserve system, resulted only in increasing the general use of credit and, as far as it was misused, in aggravating the trouble arising from this source.

Production on a large scale with an increasing use of fixed and specialized capital, tending to increase the burden of overhead costs and to result in overproduction, cutthroat competition, and overinvestment, is another characteristic of modern industry that often leads to serious maladjustment. The rapidly increasing proportion of industries that came to be carried on under such conditions as this period advanced we have already noted. At the same time all those changes in the economic order leading to increased specialization, a lengthening in time of the processes of production, and greater interdependence, though somewhat offset by the growth of better business management, increased the complexity in the problems of business administration. In such ways the rapid spread of modern capitalistic industry during these years made the problem of the business cycle and its control assume greater prominence than ever before.

There were, however, as previously noted, other factors that tended to aggravate this cyclical movement: notably war and certain characteristics of our own economic development. The economic disturbances attending the two great wars of this period unquestionably were the chief factors underlying the wartime booms and the economic depressions that followed in the decade and a half succeeding each conflict. Of the characteristics peculiar to the country the rapidity of development, particularly in the opening up of the West, and the accompanying optimism and speculative spirit were the most important. Thus, the extensive railroad construction in sparsely populated areas where it would take time to develop supporting traffic played an important part in the panics of 1873, 1884, and 1893. Increased use of reckless methods of financing this construction added to the difficulties. Speculative activities in Western lands also contributed to the financial difficulties of the farmer, so prominent in the depressions of the middle seventies and nineties. Finally, the predominant position of agriculture among our economic activities during these years made the difficulties from which that pursuit suffered a more serious matter for the country generally.

It is to be observed, however, that with the opening of the twentieth century these features characteristic of our nineteenth-century development which had tended to accentuate the business cycle were becoming less significant with the passing of the frontier. Though railroads and farmers were still destined to face financial difficulties, these were not of the type primarily originating in the rapid opening up of the West. Also the expansion of manufacturing gave the nation a more balanced

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economic life and so modified the effects of troubles arising in any one field as predominant as agriculture had been theretofore. Just how these changed conditions affected the cyclical swings of business will appear in the history of the periodic crises to which we now turn.

The Panic of 1873. It was to be expected that, after the currency inflation and other economic disturbances incident to the Civil War, serious financial troubles would mark the process of readjustment to peacetime conditions, though nearly a decade passed before these troubles came to a climax. Wholesale prices dropped precipitately in 1865 and the downward trend was continued at a more moderate pace to 1871; even then the level was about 35 per cent above that of 1860. Despite the depressing effect of this decline, the reaction in general business felt during the years 1865-1867, partly owing to financial trouble in England in 1866, was not extreme. The next three years brought an activity slightly above normal and were followed by nearly three years of great activity and general prosperity until the crash came. (See the charts on pages 542 and 586.)

Among the factors tending to delay the readjustment and to accentuate the difficulties that followed, the abnormal amount of railroad construction was prominent. Between the close of the war and the panic, the railroad mileage of the country was doubled. The financing of this construction was greatly aided by a heavy inflow of foreign capital. Farming activities were rapidly expanded and, despite the increased size of the crops, the foreign demand held up well and agriculture in general prospered. But the rapid increase in imports and the outward flow of gold to meet the balance of payments arising from this and other debtor transactions betokened danger.

Despite the boom and the speculative activities of the two preceding years, the outbreak of the panic in September, 1873, took the business community by surprise. The failure of some small firms engaged in railroad financing culminated in the failure of Jay Cooke and Co., which was overinvolved in the effort to finance the Northern Pacific. Brokerage houses and banks followed and the New York Stock Exchange closed for ten days. The New York clearinghouse banks resorted to the use of clearinghouse loan certificates and a pooling of their cash reserves. Since this proved inadequate to meet the drain on their reserves, they were finally forced to a practical suspension of cash payments. In both of these actions they were followed by banks in most of the secondary monetary centers of the country. The United States Treasury, besought for aid, released about \$13 million in currency by the purchase of government bonds but it refused to pay out more greenbacks as it had done, with doubtful legality, earlier in the year. Before the end of October, however, the money panic was over. Money began to flow into New York, both from

abroad and from the interior; the premium on currency disappeared and the banks resumed cash payments. But the speculative boom had been brought to a sudden end and the final readjustment to peacetime conditions came in the prolonged business depression that overcast the country for the following four years.

During these years the general level of wholesale prices which had started upward in 1871 again resumed a downward course, owing to the combined effects of the depression and the rising standard of value; when the government resumed specie payment in January, 1879, prices were

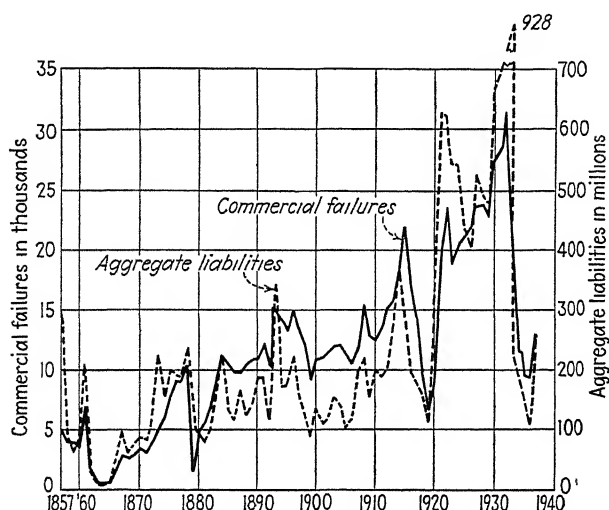


FIG. 76.—Number of commercial failures and aggregate liabilities since 1857.

back to the prewar level. The drastic readjustment of prices to those in line with world markets, combined with the depression, wrought such a marked alteration in the foreign trade, reducing imports and stimulating exports, that the balance of commodity trade shifted from the unfavorable to the favorable side. The depression plus the effects of reckless railroad finance and the desperate rate wars that broke out in the early seventies put many of the railroads in a serious financial plight. The result was that about one-fifth of the railway investment of the country was sold under foreclosure in the years 1876–1880.

Many lines of manufacturing, especially the iron and steel industry, and also coal mining suffered severely and were forced to curtail operations, or shut down and throw their men out of employment. Wage cuts were common and strikes of a more general and violent character than the country had theretofore experienced were frequent, notably those against the railroads and in the coal-mining region. The drop in agricultural prices hit farmers in the more heavily indebted sections of the South and

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West, producing unrest there also and leading to demands for control of the railroads and cheap money voiced by the granger and greenback movements. Perhaps the clearest indication of the severity and length of the depression period is afforded by the figures for total liabilities of commercial failures which for the six years ending with 1878 averaged \$200 million. Despite the subsequent growth of the country the failures during an equal period after the panic of 1893 were practically no greater, and it was not until after 1906 that the annual average for fairly normal periods rose above the level of 1873-1878.

From 1878 to 1893. By the latter part of 1878 a marked recovery was noticeable. Crop failures in Europe in 1879 and 1880 combined with unprecedented wheat and corn crops here greatly increased exports and led to heavy imports of gold, thus facilitating the easy resumption of specie payments. Prices advanced to the close of 1882, railroad construction quickly picked up, agriculture expanded, and manufacturing activity was resumed so that prosperity seemed general until a recession occurred in 1883, marked by a drop in prices and security values and followed by a sharp financial panic that broke out in the spring of 1884.

The immediate cause was a series of failures in which several enormous defalcations played a large part. The difficulties in which some of the recklessly financed railroads found themselves were also a factor, as well as some uncertainty over the maintenance of the gold standard. An acute shortage in the money market, during which the call loan rate rose to 3 per cent a day, led the banks once more to resort to the issue of clearing-house loan certificates, though without providing for the equalization of their reserves as in 1873. This proved sufficient to enable the banks to avoid suspension of specie payment, partly owing to the fact that the financial disturbance in most cities was slight and partly because the panic, unlike most, occurred in the spring instead of in the autumn when there was always a heavy drain of money into the interior for crop moving. On this occasion the withdrawal of funds from New York was slight and soon reversed. Within a couple of weeks the acute financial situation had passed and, as the general business reaction that followed was moderate and continued for little more than a year, the panic of 1884 is looked back upon as primarily financial in character.

By the latter part of 1885 a revival of business activity was in evidence, which by 1887 had developed into general prosperity. This continued, with only a moderate reaction following the Baring failure of 1890 in England, until 1893. Railroad construction was resumed on such an unprecedented scale that by the end of the decade the mileage operated was twice what it had been in 1878. This construction, aided by the growing scarcity of free land, stimulated a speculative Western land boom, and nearly 8 million acres of the public lands were sold in 1888. A large

inflow of foreign capital provided an added stimulant. The iron and steel industry flourished, manufacturing in general prospered, and the condition of agriculture might be considered normal. After 1890, however, there lurked in the background the fear that the country might be forced off the gold standard and foreigners began to sell their American investments.

The Panic of 1893. Foreboding indications of trouble appeared in the first half of 1893. Following the failure of the Philadelphia and Reading Railway in February and the National Cordage Company in May, and a collapse in the stock market, Western and Southern banks facing failure or runs began to withdraw their deposits in New York. The effects showed the weakness of the banking system and practices, which tended to concentrate the surplus funds of the country in New York and build up an inverted pyramid of bank credit upon a small basis of actual cash reserves. In the face of rapidly dwindling reserves, the issue of clearing-house loan certificates was promptly authorized in New York in June and afforded temporary relief. But in the last of July a renewed wave of bank failures, the bankruptcy of the Erie Railroad, and another stock market collapse aroused widespread fears.

The New York banks wisely adopted a liberal policy in extending loans to necessitous but sound borrowers; yet, after their reserves had fallen considerably below the legal requirement, they practically suspended payment and were followed by the rest of the country. Currency rose to a premium which continued throughout August and numerous substitutes for it were adopted in different sections of the country. Meanwhile bank loans were contracted, and a sharp decline in business activity took place. By early September the worst of the financial stringency had passed. An unprecedented influx of gold from abroad during August brought some relief, the drain into the interior fell off and finally was reversed, the demands of business declined, the reserves of the New York banks rose above the legal requirement, suspension of currency payments ceased, and the premium on money disappeared. Finally, at the end of October, Congress, which had been called in special session early in August to repeal the purchase provisions of the Sherman Silver Purchase Act of 1890, succeeded in doing so. By the close of the year nearly 600 banking institutions had failed, most of them in the West and South, sections that suffered more severely than the East in this panic. The number of commercial failures was three times that in 1873 though the total of liabilities was only 50 per cent greater. As in 1837 and 1873, this panic was made memorable by the long-drawn-out business depression that ensued.

In the years that immediately followed the panic the business reaction was greatly aggravated by the growing demand for free silver combined

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with the fiscal difficulties of the government which constantly threatened its ability to maintain the gold standard. The first cause of the trouble arose from the heavy exports of the country's gold supply, chiefly owing to unusually large imports and the withdrawal of foreign investments. Domestic hoarding of gold further aggravated the scarcity. As a result, those who wished to obtain gold either for export or for hoarding took greenbacks or the treasury notes of 1890 to the Treasury for redemption in gold. This drain, combined with the falling off in the amount of the metal received by the Treasury in payment of debts due the government, steadily reduced its gold reserve. It was the generally accepted tradition that a gold reserve of at least \$100 million was to be maintained by the Treasury to redeem the greenbacks, but the continued drain was such that the reserve fell below this minimum soon after Cleveland's administration began in 1893.

The second cause of the trouble arose from the appearance of a deficit in the government revenue owing to decreased receipts and increased expenditures. In order to meet its debts the government had to use whatever money it had available. Hence, when greenbacks or treasury notes of 1890 were turned in to be redeemed in gold, the Treasury could not retain them, as it might have done had there been a surplus revenue, and so eventually check the gold drain, but had to pay them out again. Once paid out they could again be presented for redemption in gold and so an endless chain in the gold drain was created.

An element of uncertainty was added to the situation by the fact that the law stated that the greenbacks and treasury notes were to be redeemed in "coin." Hence it was argued that the Treasury could at its option redeem them in either gold or silver, although theretofore gold had always been given when desired. Refusal by the Treasury to redeem these notes in gold would have resulted in their depreciation and the powerful silver group in Congress freely advocated such action. But President Cleveland issued a vigorous statement that the administration would do all in its power to maintain gold redemption. As the gold reserve rapidly dwindled and Congress refused to do anything to help, the government was forced to fall back upon the provisions of the Resumption Act of 1875 which authorized the purchase of gold by the issue of bonds.

In January, 1894, \$50 million of bonds were sold for this purpose and the process was repeated in November; but after each issue the continued drain reduced the gold reserve to a point lower than before, so that early in 1895 it had fallen to \$41 million. Then, because much of the gold so obtained eventually came out of the Treasury, a new plan was adopted under which the government through a third bond issue purchased about \$65 million of gold from a group of international bankers who agreed to

secure at least half of the gold abroad and to use all their influence to protect the Treasury against a further export gold drain during the six months covered by operations of the contract. Shifts in factors affecting foreign exchange rates, at first favorable but then unfavorable, resulted, towards the close of 1896, in another reduction of the gold reserve to \$63 million.

In January, 1896, for the fourth time the government was forced to sell bonds to replenish its gold reserves, on this occasion through a public offering of \$100 million. Although the gold reserve again fell somewhat below the traditional \$100 million in July, the course of events during the remainder of the year finally put an end to the trouble. In the first place, the fiscal position of the Treasury had so improved that it could retain notes redeemed in gold and so check the operation of the endless chain. Secondly, the defeat of the free-silver forces in the presidential election ended the fear that the gold standard might be abandoned. Finally, the shift in exchange rates ended the outflow of gold and soon led to large gold imports. But during the three years of this struggle to maintain the gold standard, the uncertainty as to the outcome did much to aggravate the depression through which the country was passing.

During the three and a half years of economic depression following 1893 the general price level continued to fall, the close of the period marking the end of the downward movement which had been in process ever since 1865. The great agricultural staples of the country were at a level that had not been known since the early forties and the suffering in the South and the West became acute. The railroads, especially the overbuilt and overcapitalized lines in the Far West, were in distress and by 1895 a fifth of the total mileage of the country was in the hands of receivers. The difficulties of manufacturers were augmented by the usual uncertainties incident to a revision of the tariff. Strikes became frequent, the number of unemployed steadily mounted, and in 1894 Coxey led his "army" upon Washington to demand relief by employment upon public works. Yet nothing of the sort on any large scale was attempted. The year 1895 saw some improvement, but 1896 was nearly as bad as 1894. The number of commercial failures in that year practically equaled that of the panic year, though the aggregate of liabilities was considerably lower. Long-term interest rates at this time reached the lowest level the country had thus far known.

Over all hung the uncertainties as to the maintenance of the gold standard and the outcome of the presidential election; the outlook became more ominous to conservative business as the rising volume of social discontent gathered momentum and sought relief through various panaceas. By what a narrow margin in the popular vote those sufferers, who felt with Bryan that they were being crucified on a cross of gold,

lost the battle has already been told. This uncertainty removed, other developments quickly altered the outlook and prosperity returned.

Prosperity and the Panic of 1907. The improvement in business conditions that started in the latter half of 1897 was destined to usher in a period which for widespread and long-continued prosperity was scarcely equaled in the history of the country. With but relatively slight and brief reactions in 1903, 1907, and 1914, it lasted until 1920. Probably the nearest approach to such prosperity in earlier times would be found in the periods after about 1792 or 1847. Just as in these earlier periods abnormal factors—the Napoleonic wars and the California and Australia gold discoveries—played an important part in the outcome, so in this period the rapid increase in the world output of gold, chiefly that from the South African mines, was a factor of major significance. A rapid and world-wide rise in the price level ensued. In the United States by 1910 the level of wholesale prices had risen to a point about 50 per cent above the low level of 1896. Then, in the years that immediately followed, appeared that other abnormal factor—war—and by May, 1920, prices in the United States were 170 per cent above the 1913 level. In all our history no such long-continued or extreme rise in the price level had been known though that from 1793 to 1814 closely approached it. That it would usher in a period of unusual economic expansion and business activity was to be expected.

One of the most marked changes in conditions was in the field of agriculture, an activity which had suffered most severely in the preceding depression. The decade of the nineties practically marked the end of the rapid opening up of fertile Western farm land. The growing domestic market absorbed an increasing proportion of the output of the great food staples. Railroad rates advanced much more slowly than the prices of farm products and thus gave the farmer an added profit margin. Agricultural products tended to rise more rapidly than the general price level. The average value of farm land advanced at an unprecedented rate. Never was American agriculture so continuously and extremely prosperous as during the first two decades of the twentieth century.

Manufacturing expanded rapidly, met with increasing success in opening up new foreign markets, obtained greater protection against foreign competition in the domestic market than ever before, and was generally prosperous. The condition of the railroads was greatly improved by the growing volume of traffic, though the fact that they were caught between increasing operating costs and difficulty in securing an advance in rates somewhat checked the rise in net earnings as the period advanced. The foreign trade of the country mounted rapidly and the balance in our favor rose to an unprecedented figure averaging around \$500 million a year.

Under these fostering influences, beginning in 1897, security values bounded upward and speculative activity became marked. Under the favorable combination of circumstances the movement to organize trusts attained a great momentum in the years 1898 to 1902. In this activity promoters primarily interested in making profits through the organization of trusts played an unusually prominent part. For a while the public evinced an insatiable demand for the securities thus issued, despite the high percentage of "water" contained in many of them. But in 1903 the reaction came. Some combinations failed, a mild business reaction hit the steel industry with especial severity, and promoters found themselves loaded down with a mass of indigestible securities. The general business reaction, however, was mild and had passed over by the close of 1904. There followed two and a half years of general prosperity marked by great business and speculative activity. Though the financial conditions showed signs of undue strain, the prevailing optimistic spirit failed to heed the warning, as usual, and when the crash came it was like a bolt from the blue.

The panic of 1907 in its general characteristics most closely resembled those of 1884 and 1857 among its predecessors. The financial stringency attending its outbreak was very acute while it lasted, but it was not succeeded by any prolonged business depression. For this reason it is sometimes referred to as a rich man's panic. Trust companies had been expanding at an abnormal rate during these years and the closing of one of them in October precipitated the panic. Two days later the security market crashed and the rate for demand loans rose to 125 per cent. For two weeks there was a run of depositors on the banks and trust companies resulting in numerous failures.

To relieve the money stringency the government deposited \$36 million of its funds in New York banks, the issue of clearinghouse loan certificates was authorized, and a fund was provided for extending loans to solvent concerns in greatest need. Interior banks faced with runs withdrew their funds from New York, nearly every important clearinghouse in the country authorized the issue of loan certificates, involving the practical suspension of cash payments, and private hoarding of cash became common. The shortage of currency was such that it was at a premium for over two months, and makeshift forms of emergency currency for general circulation amounting to nearly \$250 million were issued in various cities. The incentive to gold imports thus created brought in about \$96 million in two months. Relieved through these various expedients, the worst of the financial stringency had passed by the end of the year, though clearinghouse loan certificates continued in use several months longer.

It is the opinion of Prof. Sprague that the unusually acute financial distress which the country experienced during this panic was in part a

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product of mistaken banking policy, particularly lack of speed and vigor in action and the sacrifice of sound banking practice to maintain under all circumstances the fetish of the legal reserve, with the resulting practical suspension of cash payments. He says,

It is impossible to escape the depressing conclusion that the banking situation in 1907 was handled less skillfully and less boldly than in 1893, and far less so than in 1873. No new elements of weakness were disclosed, but no real effort was made to overcome difficulties which had been met with partial success at least on former occasions. A situation which was certainly less serious than in 1873 or 1893 and probably less serious than in 1884 was allowed to drift into the most complete interruption of its banking facilities that the country has experienced since the Civil War.¹

He concludes that this as well as other panics indicated that the outstanding defect in our banking system was the lack of a reserve of lending power in the central money market. "Ability in New York to increase loans and to meet the demands of depositors for money would have allayed every panic since the establishment of the national banking system." To remedy this defect was the objective of the temporary Aldrich-Vreeland Act of 1908 and one of the chief objectives of the Federal Reserve Act of 1913.

From 1908 to the Panic of 1914. The business reaction after the panic of 1907 was very moderate and of brief duration. By 1909 fairly prosperous conditions had returned and in 1910 wholesale prices reached a new peak at a level 50 per cent above that prevailing in 1896. A moderate reaction in 1911 was followed by a year of prosperity. During 1913 business was on the decline and, on the outbreak of the first World War in 1914, was slightly below normal. The settlement of the brief Balkan war in 1913 apparently had allayed the fear of trouble from this source and the business world in the United States at least had no inkling of the impending stroke. The brief panic that followed, coming at a time when business was slightly subnormal, was due entirely to the momentary abnormal situation created by the sudden outbreak of the war.

The chief difficulty arose from a combination of circumstances which had created a large volume of payments to European countries, due immediately or within a few months. (1) The imports of foreign goods had been unusually large during the first part of the year. (2) There was a large amount of short-time foreign loans estimated at \$530 million. (3) The days just preceding and following the outbreak of the war had seen European holders of American securities dumping their investments on the New York market in enormous quantities regardless of price. As

¹ SPRAGUE, O. M. W., "History of Crises under the National Banking System" in Reports of the National Monetary Commission, Washington, 1910, p. 319.

all the important European exchanges closed, the selling converged upon the New York exchange which in turn was forced to close on July 31 to prevent a complete collapse of security values. Even then a large additional indebtedness to Europe for the securities bought back had been incurred.

Ordinarily payment of such debts would be met through foreign credits based upon exports, the shipment of gold, or new foreign loans, but none of these means was then available. Europe was in no position to make new loans and, as long as German cruisers were in the Atlantic, the shipment of goods or gold was practically cut off. Under these conditions the New York price of sterling exchange rose to the unprecedented figure of over \$7 a pound, whereas normally the gold export point of about \$4.89 was the maximum. The measures adopted to meet the crisis were (1) the organization by the banks of a gold pool of over \$100 million to lend to those having to make gold payments abroad; (2) the Bank of England opened a branch at Ottawa, Canada, and agreed that gold deposited there would be accepted as if deposited in London, thus avoiding the danger of transatlantic shipment. As soon as this means of making payment was provided the panicky alarm over sterling exchange subsided and very little of the gold pool was actually used. Later, as German cruisers were driven from the Atlantic, exports were resumed and thus provided additional foreign credits; by the middle of November, sterling exchange had fallen to par.

Another problem created by the cutting off of our export trade arose in connection with the great export surplus of agricultural staples, most of which are shipped in the autumn. The cotton crop, nearly two-thirds of which was exported, was the most important of this group, and the 1914 crop happened to be much the largest that the country had theretofore produced. When exports ceased, the price dropped nearly one-half. Those who depended upon prompt sale of their crop to provide cash to meet their current obligations faced the prospect of being forced to dispose of their holdings at a heavy loss. To meet such needs the banks organized another pool to provide \$135 million to lend against cotton at 6 cents a pound. The provision for necessitous cases thus being assured, the pressure to sell because of fear subsided. Later, exports were resumed and it proved unnecessary to use all of the funds in the pool. Thus, again, the advantages of united action in time of panic were effectively demonstrated.

Although there were no serious failures or prolonged runs on the banks, the uncertainties of the situation led to such withdrawal of funds from the New York banks that the reserves soon fell considerably below the legal requirement. In the first week of August resort was had to the familiar device of clearinghouse loan certificates; but, fortunately, this was not

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accompanied by a suspension of free currency payments to depositors and a premium on cash as in earlier panics. This was due to the availability of the emergency national bank note currency authorized under the Aldrich-Vreeland Act of 1908, the provisions of which had fortunately been extended to June 30, 1915, for the Federal reserve system was not yet prepared to function. Having been printed long beforehand for just such an emergency, these notes were immediately available and the amount outstanding rose to its peak of over \$363 million in October. Subsequently, as the money stringency passed, they were promptly retired and thus demonstrated their complete elasticity and their suitability for the function for which they were designed.

By the middle of November, when the Federal reserve system started operations, the strain had passed. The export of commodities was gradually resumed and gold exports ceased as exchange rates turned in favor of the United States. The stock exchange slowly resumed operations, at first allowing only sales of certain classes of securities and with minimum price limitations. Restrictions were gradually removed when it was found there was no longer any danger of a collapse in security values, though it was not until April that the last restrictions disappeared. Meanwhile general business resumed a fairly normal pace. Although certain lines began to benefit from the influx of war orders, others suffered from the cutting off of central European markets. Over all there hung the uncertainty as to the effects and the duration of the war.

The War Years and the Reaction of 1920-1921. Although a more detailed account of wartime conditions will be given in the chapters devoted to that subject, we may here for the sake of continuity briefly note the main developments of those years as they were related to the brief postwar boom and the reaction that followed in 1920-1921. These developments naturally fall into the two periods preceding and following our entrance into the war in April, 1917.

At the outbreak of hostilities the prevailing opinion was that the war could not be of very long duration. This was based on the belief that modern warfare involved such an enormous outlay, especially when undertaken on this unprecedented scale, that it would soon result in complete economic exhaustion of the participants. The failure of the German push on Paris in 1914 seemed to make another year of conflict certain, but it was not until the late summer of 1916, when the situation of the combatants was still indecisive, that hope of an early peace was abandoned. Consequently great uncertainty and risk attended all business chiefly dependent on the war during these first two years.

By the summer of 1915, when another year of warfare seemed inevitable, a marked improvement in business activity was evident. War orders poured in, prices began to rise, and a stock market boom gathered

momentum. The influx of gold and the establishment of the Federal reserve system with its greater possibilities for expansion of bank credit combined to keep interest rates abnormally low and thus to provide an added stimulus to business expansion. 1916 was a year of intense activity, rapidly rising prices, and high profits. By April, 1917, wholesale prices were nearly 75 per cent above the level of June, 1914, but in some industries rising costs began to reduce the high profits. Gold continued to pour into the country at an unprecedented rate. The net imports during the period prior to our entering the war were over \$1 billion, constituting an addition of over 50 per cent to our stock of gold. With this additional basis for currency and bank credit the money market continued relatively easy, despite the large loans to the warring countries and the active domestic demand.

When the United States entered the war in April, 1917, it not only faced the problem of raising the necessary funds to meet its own enormous military expenditures but it also undertook to raise money to lend the Allies such amounts as were necessary to pay for the supplies they were buying in this country and so relieve them for the time being of the necessity of shipping gold or finding other means of payment. About a third of the needed funds was raised by taxation and the remainder was obtained through borrowing. To make possible the sale of the enormous issues of government notes and bonds on as favorable terms as possible, it was necessary to employ every means to facilitate the expansion of credit. These means will be described elsewhere. Here it must suffice to note that as a result there was a great expansion in the circulating medium in the form of Federal reserve notes and also in bank loans. Fundamentally this meant inflation and the inevitable result was reflected in the continued rise of prices. By the end of the war in November, 1918, the level of wholesale prices was more than double that for 1913—this despite extensive governmental regulation of prices.

With the war over, a reaction in business activity and prices was generally anticipated and the first of 1919 was marked by business uncertainty and a slight decline in prices. Then the trend was reversed and there followed the brief yet active postwar boom that culminated in the early summer of 1920. Though the demand for war munitions ceased, the European demand for foodstuffs and other products to supplement their depleted supplies continued, and our domestic demand for goods, stimulated by the general prosperity, was maintained at a high level. The necessity for additional government borrowing led to continued pressure to keep interest rates as low as possible until the autumn of 1919.

Under these various stimuli and the too prompt abandonment of regulation, prices jumped upward once more and by May, 1920, when the peak was reached, the level of wholesale prices stood at 272 as compared

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with the base of 100 in 1913 and 207 just after the war had ended. Even the Civil War had not brought such a rise in prices; we would have to go back to the War of 1812 to find an approximate equal. Between October, 1919, and the middle of 1920 loans and discounts of all American banks rose by over \$5.8 billion or more than 23 per cent. That the inflationary means by which this rise had been brought about could not continue much longer with even a pretense of remaining on the gold standard was obvious. Even the enormous credit expansion made possible by the Federal Reserve Act and its wartime amendments on top of our greatly augmented stock of gold had been carried to the point where any appreciable further extension would have necessitated resort to the emergency measures of the law. The reaction was overdue and it broke with great suddenness.

A warning sign, little heeded, had been given in November, 1919, when the various Federal reserve banks, for the first time freed from the pressure of the Treasury, slightly raised the rediscount rates. This was followed by rapid advances in January and again in May of 1920. Though the reserve board was subsequently charged with chief responsibility for the reaction on this account, it is clear that a failure so to act would eventually have caused still greater trouble and it is to be regretted that the board was not free to make this move much earlier. In April came a sharp reaction in Japan where a similar postwar speculative boom had been under way. Meanwhile the "buyers' strike" was developing in this country and retailers loaded down with accumulating stock began drastic price cutting. As foreign countries began to resume the production of goods to supply their needs or found their purchasing power curtailed, exports declined and many outstanding foreign orders were canceled.

The precipitateness of the succeeding drop in the wholesale price level from the high point of 272 in May, 1920, to 148 in June, 1921, a point still about 50 per cent above the prewar level, has never been equaled in our history, unless at the time when the Revolutionary Continental currency was abandoned as worthless. Even after the War of 1812 the decline was spread over about five years. In this price drop agricultural products suffered more than any other important group of commodities. Wheat selling at over \$3 a bushel and cotton at 43 cents a pound in July, 1920, had fallen to \$1.25 and 15 cents respectively a little over a year later. (See the frontispiece chart.)

Fortunately, the country was able to pass through this extraordinarily rapid deflation without the usual acute monetary panic. There was no general run upon banks, no hoarding, and no shortage of currency. This may be attributed chiefly to facilities afforded by the Federal reserve system which made possible a considerable expansion of both Federal reserve notes and rediscounts by means of which aid was extended to

such banks and their customers as were in need of assistance. No important national banks failed and only a few small ones; but among state banks, chiefly those in the agricultural regions, the failures were numerous. Commercial failures which had been abnormally low since 1917 rose to a new peak of over 23,000 in 1922 and the aggregate liabilities in both that year and the preceding year were over \$620 million, far above any previous record. (See the chart on page 871.)

The general survey of developments during the rest of this decade, particularly relating to the prolonged depression that started in 1929 and its subsequent course, which were at bottom closely related to causes arising out of the first World War, can better be understood after the events of the war years have been described and will therefore be dealt with in a later chapter.

CHAPTER XLI

THE GOVERNMENT AND ECONOMIC LIFE

SINCE 1860

Introduction. The activities of government in the economic order are so essential and so numerous that the state must be considered as an economic as well as a political institution. If the state is to perform its economic functions efficiently, its organization and activities must be such as will best enable it to promote the economic development and well-being of the people. This involves at least two things. In a nation that has accepted a democratic type of government as its ideal it means that the people—with only minor and obviously reasonable exceptions—shall choose their representatives and rulers and thus have the final say in the determination of governmental policy. It also means that the organization and activities of the governmental units must be adapted to the changes in the economic order. This period saw progress made along both these lines of development.

A more democratic control was secured by extension of the franchise to the only large groups of adult citizens theretofore generally denied the right to vote, and other changes gave the voters a more direct control over political action. The problem of adapting the organization of the various governmental units to the changing economic order proved a difficult and complicated matter. As far as this objective was concerned the Federal Constitution remained almost unchanged, though its interpretation by the Supreme Court brought some modifications in its application to specific problems. The state constitutions, especially those of the new states, showed somewhat greater adaptability; this was also true of the governments of the minor political units. For the most part, however, adjustment had to be made as best it could under the general framework and limitations of government established in earlier days. Thus such adjustment as actually took place was chiefly in the form of new legislation on the part of the various political units. This resulted in enormously increased governmental activities, including not only those of a regulatory type but also those assuming the more positive form of public provision for social needs. Thus, from the last quarter of the nineteenth century, there was evident a more marked tendency away from the individualistic, laissez-faire policy so dominant during the preceding years of the century.

These growing governmental activities in turn involved a rapid increase in expenditure and hence the necessity for greater revenue, since relatively few of them were self-sustaining. Whereas borrowing was a temporary expedient, taxation in one form or another was the final necessity, and the problem how to raise the taxes, which in time amounted to a figure equal to a fifth or more of the national income, became increasingly difficult. It was complicated by the relatively fixed provisions determining the taxing powers of the various political units, by the increasing variety in the sources of income and forms of property rights, and by the need for a system of taxes that as a whole would distribute the burden involved in a manner most nearly consonant with the general interests of society.

The Progress toward Greater Democracy. The outstanding advances in the broadening of the franchise during this period were the extension of the ballot to Negroes and women, the only important groups of adult citizens that had not generally secured the vote by 1860. This was finally accomplished, however, only by resort to Federal action in the form of constitutional amendments; even then, in the case of the southern Negroes, the grant was largely nullified by subsequent state action.

After the Civil War the country turned to the problems of reconstruction in a spirit still embittered by the fratricidal strife and lacking the far-sighted, tolerant leadership of Abraham Lincoln. It was not until 1877 that the last of the state governments set up in the South after the war passed back under the control of the native white population. In the interval the region had been subject to the corrupt and generally incompetent "carpetbag" rule provided by the combination of Northern officeholders and ignorant Negroes backed up by the military forces of the Federal government.

Meanwhile the country, anxious to protect the rights of the Negroes, adopted three constitutional amendments. The thirteenth abolished slavery. The fourteenth declared among other things that

No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.

This amendment has proved to be of great significance for whites and property rights in general as well as for the Negro. The fifteenth declared that

The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color, or previous condition of servitude.

Outside of the South, though few states had theretofore extended the franchise to the Negro, the Fifteenth Amendment became effective in

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practice. In the South the large proportion of Negroes in the population, more than half in a few states, was deemed a menace to good government by the whites who soon took determined measures to prevent most of the freedmen from voting. At first moral suasion, fraud, or violence were employed. Beginning in 1890, various constitutional restrictions, nominally applying to all citizens regardless of color so as to escape condemnation under the Fifteenth Amendment, but in application excluding many of the Negroes and also some poor whites, were generally adopted. The Negroes of the South thus constitute the largest group of adult citizens still very commonly deprived of the ballot.

The movement for women's suffrage, though started before the Civil War, was slow in gathering momentum or achieving actual gains; but it finally swept the country with surprising ease. The earliest gains commonly took the form of allowing women to vote on school questions, and in some localities those who paid taxes were granted limited franchise rights. In the grant of equal suffrage to the sex, as in most extensions of the franchise, the West took the lead. The first instance was in the territory of Wyoming in 1869; on its admission to statehood in 1890 it had the honor of being the first state with full suffrage for women. Slowly but steadily other Far Western states fell into line until in 1918 all of the states from the Rocky Mountains west to the coast, except New Mexico, had equal suffrage.

In the rest of the country only Kansas and New York had advanced thus far—the latter in 1917, just 50 years after the failure of the first serious effort to secure women's suffrage, which had been made there in 1867. New York's capitulation in this matter, aided by the numerous wartime activities of women and other innovations of the period, gave a new impetus to the movement and in 1920 the Nineteenth Amendment, providing that "the right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of sex," was ratified. This created by far the largest single addition to the electorate that the country had ever known.

These additions to the electorate were to a slight extent offset by new restrictions. With the growing opposition to immigration, the wartime concern about aliens, and the decreasing rivalry of the states to attract foreigners, a movement to repeal such franchise rights as had previously been granted to aliens spread very rapidly, so that by 1929 there was only one state in which they still enjoyed that privilege. A desire to restrict the right to those better fitted to exercise it, also in part directed against the alien as well as the Negro, led some states to set up requirements of the nature of literacy tests, such as an ability to read or explain their constitution. However, the loss from such restrictions was slight

compared to the previously described additions made to the electorate during this period.

The net result of these changes in the franchise was for the first time to open the ballot to every group of adult citizens of any size except a considerable portion of the Negroes of the South. With this exception, practically every citizen was placed on an equal footing, as far as possession of voting rights could do it, to protect his rights, economic or otherwise, and to control governmental action according to his wishes and ideals. How far these extensions of the franchise resulted in an electorate that gave the people a better government is another question which cannot be discussed here. Certainly the result was an electorate very different from that conceived of as the most desirable by the founders of the Republic.

In addition to the extension of the franchise, this period, mainly in the second half, witnessed the adoption of various expedients for giving voters a somewhat more direct voice in governmental affairs. Direct primary laws, first made state-wide in Wisconsin in 1903, soon spread through the Northern and Western and later the Southern states, until in three-quarters of the states the system was mandatory and optional in most of the remainder. Provision for the direct election of United States senators, made general by the Seventeenth Amendment in 1913, was another step in the same direction; in course of time this resulted in a marked alteration in the make-up of that body, then conspicuous for the number of its millionaires. The opportunities for political manipulation were further circumscribed by various laws limiting campaign expenditures and requiring publicity as to contributors and outlay. The power of wealth in politics which Lord Bryce had noted as one of the most serious dangers in modern democracies, especially in the United States, was thus somewhat curbed. Though confined to state or municipal government, and even there rather limited in adoption, the movement towards the initiative, the referendum, and the recall gave the people a more direct voice in governmental affairs.

Government and the Changing Economic Order. While the process of democratization was proceeding along these lines, the problem of adapting the organization and activities of government to the changing economic order was becoming increasingly important and difficult. The most revolutionary changes incident to the spread of modern capitalistic industry in this country came in the second half of the nineteenth century and introduced an economic order such as had never been dreamed of when the general framework of Federal and state governments was being formulated at the close of the eighteenth century. At that time the division of powers between the Federal and state governments established by the

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Constitution was deemed fairly adequate for meeting the problems envisaged by the statesmen of the day.

The country then had less than 4 million population, practically confined to the Atlantic coast states, and a relatively simple economic organization which, except for the fairly important foreign trade of some states, was essentially provincial in character, so that the economic activities of one state had little effect upon those of any noncontiguous state. In contrast with that situation which faced the founders of the republic, we have today a population of over 131 million spreading over a territory extending from the Atlantic to the Pacific, more than three times the size of the original area, to say nothing of insular possessions; these people live under an economic order so highly integrated, complex, and interdependent that the activities of all groups and sections are closely bound together.

That the old governmental framework should prove well adapted to the new economic order was hardly to be expected. This lack of adaptation was especially marked in the old division of powers between the state and the Federal governments. The new economic order created many problems that were essentially national in scope and character and could be dealt with effectively only by the Federal government. Yet the Federal powers were narrowly circumscribed by a Constitution which granted the central government the very minimum of powers deemed essential in 1787, which was difficult of amendment, and which created an elaborate system of checks and balances that was another obstacle to ready adaptation. Under these circumstances the surprising thing is that the Constitution survived with so little change and without causing greater friction in the social order. This may be explained in part by the broad terms in which it was formulated and by a certain element of elasticity inherent in the final interpretation of its terms by the Supreme Court. Nonetheless the adaptation, as must already have become evident, is still far from satisfactory.

One result of the relative fixity of the framework and powers of the Federal government has been to cast upon the states the main burden of actual adjustment to the changing economic order. (1) This was due to the fact that the states retained all the powers of government not directly or impliedly invested in the Federal government under the Constitution. (2) It can be attributed to the fact that the state constitutions, generally speaking, proved far more susceptible of amendment than the Federal Constitution, and not infrequently were entirely rewritten. Furthermore, the various units of local government were entirely subordinate to the states, which were free to change their form and powers or to create new units whenever changing conditions made this desirable. In fact, it was in these local units that the process of adaptation, so far

as changes in the organization and powers were concerned, proved easier than elsewhere.

However, the adaptation of governmental activities to the changing economic order was by no means entirely dependent upon changes in the general framework of government or in the division of powers between the different governmental units. It was possible to accomplish a great deal by new legislation under the existing system. Even in cases where that system remained ill-adapted to the new economic order, legislation by some governmental unit was generally preferable to no action at all. Under these circumstances the volume of legislation dealing with the economic life of the nation was expanded very rapidly during this period, and the general attitude toward such legislation reflected an increasing trend away from the general *laissez-faire* policy which had prevailed during the preceding years of the century.

The Reaction from Laissez Faire. The term *laissez faire* implies a relative absence of governmental interference in economic life—a high degree of freedom for individual initiative. It is commonly applied to a situation lying between the extremes of anarchism on the one side and socialism, communism, or fascism on the other. Thus, it is one of those extremely vague concepts which it is difficult to apply with accuracy to a concrete situation because it is relative in character and because there is no method for measuring with any accuracy the degree of *laissez faire* that exists in any given situation. Judgment on this point is commonly very impressionistic in character. Furthermore, the lack of any clearly defined basis for measuring the degree of *laissez faire*, so that any vaguely assumed basis will vary among individuals and among generations, causes further confusion. Thus governmental activities that a typical American of the pre-Civil War period would have considered a serious departure from his conception of a *laissez-faire* policy might be viewed as a very minor matter by the American brought up under the social attitudes of today.

It should also be noted that this shift in policy was most marked among Federal activities, for it had been in evidence in state and local government action throughout the preceding period as the economic problems treated by the rise of large cities and the changing industrial society necessitated more control. The common impression that this trend did not attain appreciable momentum until the last quarter of the nineteenth century is due to the tendency to concentrate attention on what the Federal government did and overlook the growing activities of the states and cities. With this warning as to the character of the assertion that the last half century has brought a reaction from the more extreme *laissez-faire* policy of the preceding period, we can turn to inquire as to the explanation for this change.

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The prevalence of what is commonly considered a general policy of *laissez faire* in the United States in the early years of the nineteenth century was due to a combination of circumstances. In western Europe the reaction against the elaborate system of state interference in economic activities, built up through several centuries and reaching its culmination in the Mercantile System, was in no small measure a product of the fact that this system, whatever its original justification, proved unsuited to the new economic order that was ushered in during the eighteenth and nineteenth centuries. The business world demanded to be set free from the fetters of a bygone age and found support for this attitude in the theories advanced by such groups as the Physiocrats in France and the classical school of economists in England.

In America, however, this reaction against an antiquated system of state regulation was a much less significant factor in the adoption of a *laissez-faire* policy, simply because the colonies had never adopted more than a fraction of the elaborate European system of regulation, and many of the regulatory measures that had been taken over proved unsuited to the new environment and so were practically ignored or soon abandoned. Thus in the United States the nineteenth-century heritage from colonial times was a much more individualistic system than that inherited in Europe.

The chief explanation for the acceptance of a *laissez-faire* policy in the United States is to be found in the general social environment that prevailed, at least until the latter part of the nineteenth century. The people were an ambitious, energetic, liberty-loving group in whom the spirit of individualism was highly developed. Those who migrated to the New World were chiefly actuated by the desire to improve their material condition, and business became the all-absorbing pursuit of most of their descendants. A rich, virgin continent combined with the introduction of modern technology provided an unparalleled opportunity to acquire wealth, and all that the people asked was to be let alone to use the opportunity as each saw fit.

On the other hand, there was no general recognition of a need for much governmental interference in the existing economic order. In part this is to be explained by the predominance of the extractive industries and the rural environment in which most of the population lived. The economic character of the typical small-scale farming operations presented few of the problems of modern capitalistic industry and the isolation of rural life did not create the many needs for social control that developed with the rise of the modern city. Naturally, too, the people living in the simpler rural environment were slow in appreciating the new problems confronting those in the industrial centers and consequently were backward in providing the political support for legislation

required to meet them. The significance of this situation was increased by the fact that, as time went on, the representation of the urban groups in the legislative bodies, both state and Federal, but especially that in the upper branches of these bodies, generally failed to increase in proportion to the growth of the urban population. Yet, despite these influences, the trend of development in the economic order in the period after 1860 was such that a marked swing away from the extreme laissez-faire policy of the preceding period was soon in evidence and this, as time went on, though in sporadic movements, steadily gained in strength.

The main factor underlying this shift was the spread of modern capitalistic industry with its various manifestations, especially urbanization, which proceeded so rapidly during the second half of the nineteenth century. Change, even when in a direction considered progressive, seldom brings results that are wholly good; some undesirable reactions are likely to develop along with the benefits and create new problems and hence the need for new forms of social control. It was to be expected, therefore, that with any such rapid and revolutionary change as took place in the economic order during the course of the nineteenth century a host of new problems would arise that required some form of social control designed to lessen or eliminate the undesirable results of the new order.

Numerous illustrations of this need are to be found in the period preceding 1860 and the resulting efforts to provide the necessary social control appeared in the new state legislation dealing with canals, railroads, factory labor, banks, insurance, etc. During the first half of the century, however, the changes wrought were less sweeping and rapid than in the second half of the century. Moreover, it took time for people to become aroused by the new evils that developed and still more time to secure the needed legislation. Thus it was not until about the last quarter of the century, especially in the case of the Federal government, that a very noticeable movement reflecting a reaction against the prevalent laissez-faire policy gained much momentum.

Among the more fundamental changes underlying this were the growth of large-scale business enterprise, the rise of monopolies, the spread of the corporate form of business organization, the appearance of new problems of labor, and the expansion of the cities. Even more significant was the general tendency toward increased specialization and hence greater interdependence throughout the economic order. This meant that each individual was more and more affected by what other individuals did and that an effective coordination of the increasingly complicated parts of the economic mechanism was required. Out of this situation developed of necessity a greater stress on the social point of view and a recognition of the need for more social control.

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In the period after 1860 the first impetus came from the Civil War. As has previously been pointed out, effective prosecution of a serious war requires an unusual degree of governmental control to secure the proper mobilization and conservation of a country's resources. That such was the result in both the Confederacy and the Union, though far less marked in the latter, during the Civil War has already been shown. The years following the return of peace brought something of a reaction, apparently a common consequence of the unusual spirit of self-sacrifice aroused by the patriotic fervor of war. The outstanding exception was the railroad legislation of the granger states around 1870. The growing danger of monopoly, not only in the railroad field but in other public utilities and in industry, led Congress to pass the Interstate Commerce Act of 1887 and the Sherman Anti-Trust Law of 1890 and also led to much state legislation; and the increasing seriousness of labor troubles brought forth much needed labor legislation. Still the power of vested interests opposed to governmental interference with private enterprise remained a potent force, faced by relatively weak opposition until at least the opening of the new century.

The influence of "big business" on public affairs was probably at its height during the three or four decades following the Civil War. The mid-century attitude of many leaders of enterprise, reflected in the famous exclamation of William H. Vanderbilt, "The public be damned!" had been somewhat modified by 1902 when President Baer of the Reading Railroad, then involved in the anthracite coal strike, referred to "the Christian men to whom God in His infinite wisdom has given the control of the property interests of the country. . . ." Similar views were common among the new generation of captains of industry in the last century. The greatly modified attitude of this group and its growing sensitiveness to public opinion, which became evident as the twentieth century advanced, were reflected in the frequent establishment of public relations departments in many large corporations—a move considered wise business policy even when it did not result from changing personal convictions. Such progress in social control as was achieved during the latter part of the nineteenth century can be attributed chiefly to the farmers aroused to action by economic distress, to the growing power of organized labor, and to the activities of a very small group of social reformers.

With the opening of the new century, however, a distinct change in the general attitude is noticeable. This brought the "muckraking" period of the popular magazines when various forms of special privilege and the practices of "malefactors of great wealth" were effectively portrayed in numerous articles. In Federal affairs, the administration of Theodore Roosevelt under his aggressive leadership and his emphasis on the "new nationalism," in marked contrast to the easygoing complacency of the

McKinley administration, brought increasingly effective governmental control in economic affairs. This was supplemented in the fields of state control by much legislation of a similar character, particularly in regions where the Insurgent or Progressive political parties arose. The advent to power of the Democrats under Wilson's liberal leadership was marked by a series of important reform measures. Then, as the country was drawn into war, the necessities of the situation at once resulted in an extension of governmental control over business that went far beyond anything the country had ever experienced or even dreamed of.

The return of peace greatly weakened the patriotic spirit of self-sacrifice for the common good which overcame opposition to the social control measures of the war and, at the same time, considerably lessened the immediate need for such measures. A reaction set in, as if the strain upon men's self-sacrifice had been too great for longer endurance, and the business world hastened to try to regain the ground lost by freedom of individual initiative during the war years. "Less government in business" was the cry. The Republican party was returned to power and under the lax Harding administration, the ultraconservative administration of Coolidge, and that of Hoover with its reiterated stress on the old American spirit of rugged individualism, things were allowed to drift, even after the outbreak of the depression, until the situation became so serious that people talked of the downfall of the capitalistic system and fear of a social revolution became widespread.

As usual in times of economic distress, when the presidential election of 1932 occurred, the party in power was defeated and a Democratic administration under Franklin Roosevelt took over the reins of government just at the moment when the whole banking system of the country faced a complete breakdown. Courageous and speedy action on the part of the President at once led to a group of measures involving a far greater departure from the policy of *laissez faire* than the country had ever known in time of peace. One of the most striking features of the situation was the very general and often enthusiastic support of this action by the more conservative business element of the country, at least until the crisis had passed. The individualistic cry of less government in business was, for the time being, completely silenced, for capitalists, as well as farmers and laborers, had so suffered from the disorganization of the economic system that most were ready to welcome the "New Deal." Indeed, if the changed attitude of the conservative moneyed class at this time is compared with that which prevailed among the same class of the preceding generation during the last prolonged depression in the nineties, the contrast, even allowing for the subsequent reaction, is most striking.

One indication of how far the government went in enlarging the scope of its activities is found in the increase in the number of employees in the

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Federal executive civil service which rose to 1,000,000 by 1940 as compared with 572,000 in June, 1933; in 1861 the figure was 49,000 and only 6,000 in 1816. That the rugged individualism of the previous century requires modification in the economic order of the twentieth century is now more clearly recognized and accepted than ever before. The depression following 1929 thus seems likely to mark the beginning of a new period in the reaction from the policy of *laissez faire*. Judging from current world trends, the problem for the future appears to involve a choice among reform of private capitalism, state capitalism, socialism, and communism.

The State Governments and Their Activities. The expansion of governmental activities since 1860 has been most marked among the states and their minor political units. This has been due, as previously explained, to the fact that the states retained all powers not expressly or impliedly delegated to the Federal government and, subject to the same limitations, had complete control over their minor political units; the activities of the Federal government were definitely limited by the provisions of the Constitution. Also it was generally found somewhat easier to obtain popular approval and support for new activities among these smaller, more homogeneous state or local political bodies than in Congress which represented the heterogeneous interests of the whole nation. The new activities taken on were made possible in part by changes in the state constitutions and to a still greater extent by new legislation.

The alterations in state constitutions immediately after the Civil War were chiefly those in the Southern states, necessitated by the policy of reconstruction adopted by Congress. In the main the changes were concerned with the prohibition of slavery, the assertion of the paramount authority of the Federal government, the repudiation of war debts incurred in aid of the war, the civil and political rights of the Negroes, and the disfranchisement of various groups active in the struggle. There then followed a period in which constitutional changes were made removing many of the disqualification and compulsory clauses and, still later, a series of changes practically disfranchising many of the Negroes. Outside of the states affected by reconstruction, constitutional alterations were not numerous or radical in character and relatively few reflected changes in the economic order.

Beginning about the last decade of the century, the demand for constitutional changes either in the form of amendments or complete revisions became more insistent and the resulting alterations assumed a more radical character. Though the pressure of changing conditions and ideals was the main cause, some impetus was given by the examples set in the constitutions of the new Western states admitted to the Union. Six of these states were admitted in 1889-1890 and four more by 1912, rounding

out the present total of forty-eight. The less conservative and more democratic ideals of the frontier West were clearly reflected in the constitutions of these new states, those of Oklahoma and Arizona being the most radical. Amendments to older constitutions in some of the other Western states, such as Oregon, made them equally progressive in character. Generally speaking, the older states were much slower in altering their constitutions, owing partly to the strict provisions about amendment, partly to the more conservative spirit that still dominated them.

For the period since 1860 as a whole, a few of the outstanding features of the general trend in the development of state constitutions may be noted in addition to those already mentioned arising out of reconstruction. One was the tendency to make the constitutions much more detailed and longer, resulting in less elasticity and more frequent need for amendment. The power of the governor tended to grow and that of the legislature to decline. Increasingly elaborate provisions regarding corporations in general and various specific classes of them, such as banks and railroads, were introduced. The frequent prohibition of local and special legislation and the tendency toward municipal home rule gave the cities and smaller localities greater freedom of action. Popular election of judges and the chief state officials became the common rule and biennial sessions of the legislature the usual choice. Finally, the provisions governing constitutional amendments tended to make changes somewhat easier. It was partly through these constitutional changes, but to an even greater extent through legislation not dependent upon them, that the activities of the states were so greatly expanded during this period.

These growing state activities arose in part out of social changes creating new problems that called for social control, the resulting state activities being of a regulatory character. They also arose in part out of a growing belief that the state should do more than formerly in providing goods or services to meet important social needs, and this led to activities that may be called positive in character. Though these two types of activity somewhat overlap so that no very sharp line of distinction between them can be drawn in practice, the differentiation is still of significance for the positive form of action involves a direct state-determined addition to the people's standard of living, while the regulatory form of action commonly has only rather indirect reactions upon that standard.

The breadth of state activities is such that it is impossible here to list more than the chief fields in which they are carried on. Much of the expansion has occurred in the more detailed ways in which the state has functioned in these fields. Judged by the amount of money expended in 1929, highways and waterways; education; and charities, hospitals, and corrections were, in the order named, the leading functions performed by

the states. The outlay on these three groups of activities made up three-quarters of all state expenditures in that year. Although the state outlay on highways has become important only in the last decade or two, the expansion of the other two functions has been a more gradual development throughout the period since 1860. Two other state activities, chiefly of very recent development, are conservation of natural resources, especially the agricultural, and recreation. All of these activities, it will be noted, are chiefly of the positive type representing contributions to the standard of living.

Activities of a regulatory type generally involve far less outlay of state money but have increased greatly in scope. The very meager control exercised by the states before 1860 over corporations, banks, railroads, insurance companies, etc. has undergone a tremendous expansion. Public utilities, warehouses, cotton gins, and various new financial institutions are under state control; a great mass of legislation has developed to protect the interests of labor; numerous professions and occupations are subject to licensing systems; the courts have been elaborated; and aid is given local governments in the field of public health and sanitation. In many instances these activities reflect a tendency for the state to take over or supplement functions formerly undertaken by minor political units, especially the counties—one phase of a common centralizing tendency in government. Another phase of the same tendency is seen in the extensive grants of funds to the states by the Federal government, especially for road construction, agriculture, education, and health, all largely a development of the last two decades. The depression brought added grants on a large scale. These grants, as far as they are conditional, generally require supplementary grants from the states and the maintenance of certain standards. Thus, the Federal government exerts an appreciable influence over these state activities, and furthers the process of centralization of control.

Local Government Activities. In most of the country the county is still the chief unit of local government. But the changing economic and social order has left it in a somewhat uncertain and precarious position. It is too large to serve the chief needs of all but the great metropolitan centers and it is becoming too small for the most efficient performance of the main functions of government in rural districts. The state has been assuming more and more of the county functions and, although the county has extended its activities in other lines, none of these is of marked importance. Lack of adequate information makes generalization as to the development of activities of the towns and villages unsafe, but it would appear that, whereas some of their functions had been at least in part taken over by the county or the state, they had to a very moderate extent assumed a few of the newer activities being adopted by the cities.

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A rather widespread feature in the development of local government has been the creation of districts designed to carry on specialized functions for which the older units such as the county, town, or city were not well adapted. School, highway, drainage, and irrigation districts are the most common; but park, sanitation, levee, agricultural development, mosquito abatement, and herd are among the nearly half a hundred varieties that have arisen.

It is in city government and activities that the greatest changes have taken place since 1860. Owing to the comparative freedom from constitutional restrictions on change, city government has proved easy of adaptation to the new conditions. In addition, the mass of population in large cities and the closely interknit life in themselves create a greater need for governmental control than exists in rural districts, and the concentration of wealth and the more advanced social spirit help to provide both the means and the impetus to very different activities.

The movement to reorganize the framework of city government first got under way in the seventies. This was due partly to growing needs and partly to the corruption and misgovernment in some of the larger cities which became notorious at that time and has never since been adequately controlled, so that the city still remains the weakest point in American government. At this time the tendencies were to check special legislation for individual cities and to increase the influence of the mayor through the power of appointment and the veto, while some progress was made in introducing civil service reform and budgetary control. In the twentieth century the tendency toward municipal home rule has advanced, and the effort to secure more centralized, responsible, and businesslike administration has led several hundred municipalities to try the commission or the city manager form of government.

The enormous expansion of municipal activities since 1860 is due in part to a far more elaborate and extensive performance of some of the most essential general functions but slightly developed theretofore, and in part to an assumption of many entirely new functions, new at least for most cities. Among the former were such activities as administration of justice, protection of persons and property, street construction, maintenance, and lighting, sanitation, and education. Among the activities generally assumed more recently are personnel service, provision of pensions, city planning and zoning, numerous forms of health conservation, hospital service and charitable relief, library service, extensive forms of recreational service, and various essential public-service enterprises.

The broad range that the municipal activities of the largest cities have come to cover is but imperfectly suggested by listing them. Perhaps a better idea is conveyed by a study giving a fairly detailed list of the activities assumed from year to year by the city of Detroit. Of the 306

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activities of that city in 1930 only 45 had been assumed before 1860 and only 129 previous to 1900. With such an expansion of governmental activities, it was inevitable that expenditures would grow enormously and that the problems of state and local finance would assume increased importance.

State and Local Finance. The expansion of state activities up to the last of the nineteenth century proceeded at a very moderate pace. State finances generally were handled with sufficient care so that, after the increase in debt arising out of the Civil War and reconstruction, the total of state indebtedness steadily declined to the middle nineties. The increase in state debt in the Northern states during the decade of the sixties was largely confined to New England. The debt of the Southern states in 1870, excluding that outlawed because incurred in aid of war, was about double what it had been in 1860 and subsequently rose still higher, chiefly due to the extravagance and corruption of the carpetbag reconstruction governments; as these were driven out, advantage was taken of one excuse or another to repudiate some \$155 million of these bonds, thereby cutting the debt of these states by more than half.

From a total net debt of about \$350 million for all the states in 1870 there was a decline to less than \$200 million in 1895, or measured on a per capita basis a reduction from \$9.15 to \$2.80. Thereafter, more frequent resort to borrowing to finance growing activities brought the state debt up to nearly \$350 million again in 1913, or \$3.57 per capita. From then the debt mounted at a rapid rate, owing in part to the advancing price level, but chiefly to the expansion of state expenditures for improvements, especially highways. By 1923 the total net state debt had passed \$1 billion; by 1937 it was over \$2.4 billion, or almost \$19 per capita.

Among the minor civil divisions the history of the county debt during this period followed a trend very similar to that of the state debt. A rise after 1860 was followed by a decline to 1880 and a slight growth in the following decade brought the total to \$145 million in 1890, or \$2.51 per capita. Thereafter a rapidly accelerating rate of increase brought the total in 1922 to nearly \$1.3 billion, or \$13.18 per capita, and by 1932 to almost \$2.4 billion, or \$21.82 per capita. Excluding incorporated places the debt of other minor civil divisions remained relatively small until about 1902 when the total was only \$86 million. Thereafter the rate of debt growth of this group exceeded that of any other, owing partly to the great increase in expenditure for schools, which constituted over half the total debt of this group, and partly to the creation of many special districts undertaking extensive public improvements, especially in metropolitan regions. In consequence, by 1922, the total had reached nearly \$1.8 billion, a figure considerably above that of the county debt; by 1932, it was nearly \$4 billion.

Far more striking in its growth than that of any other political units except the Federal government is the debt of the cities. The great increase in the number of cities as well as in their size must be kept in mind when contrasting the growth in the absolute amount of this debt with that of other political units, but the fact that municipal activities tended to expand very rapidly and at a rate that typically exceeded that of the increase in city population was also a very important factor. These reasons also explain why the total city debt, unlike that of most political units, underwent a considerable and constant increase during the period up to 1890. At that date the total net debt of all incorporated places was \$700 million, an amount probably between two and three times the total for 1860, though only a crude estimate can be made for the earlier year. During each of the two succeeding decades the debt was about doubled. Thereafter, despite the fall in the value of the dollar, the rate of increase declined so that the total net debt reached \$4.7 billion in 1922, or \$71 per capita, and \$8.8 billion in 1932 or \$111 per capita. Of the second total approximately 70 per cent represented the debt of cities with 30,000 or more inhabitants. If we consider cities of this size only, their total net debt in 1932 was over \$7 billion, or \$143 per capita, reflecting the tendency of the per capita debt to increase with the size of the city. The enormous increase in the total of state and local debts during the two decades preceding 1930, though relatively less extreme among municipalities, became an aggravating factor in the difficulties that beset the country during the economic depression after 1929.

The growth in state and local debts during this period was mainly a product of those activities that necessitated a fairly large outlay for some form of public improvement. It is estimated that for recent decades approximately nine-tenths of the proceeds of state and local bond issues, other than those for refunding purposes, were used for various construction projects. Up to about 1880 furtherance of railroad construction was one of the chief purposes in the issue of bonds; thereafter, such issues rapidly declined. Waterworks, schools, streets, sewerage systems, and miscellaneous public building were most prominent among the purposes for which municipalities bonded themselves in the early years of the period; in recent decades recreational facilities, institutions for the care of the poor, the sick, and the aged, and in some places, public-service enterprises have become more prominent. Considering state and local units of government as a whole, education, charitable institutions, and highways generally absorb much the greater portion of proceeds of bond issues, the growth in the outlay for highways since 1910 being especially marked. Following the depression starting in 1929, the issue of bonds for public relief, almost unknown theretofore, attained large proportions. The general policy, that except in an emergency such as war, bonds

should be put out only to meet the cost of fairly enduring improvements was well adhered to up to this time. As a result such expansion of governmental activities as involved an increase in operating expenditure necessitated heavier taxation.

The growth in the total burden of state and local taxation during this period appears to have followed a general trend similar to that of the debt. Though complete figures are lacking, we have statistics of the ad valorem or property tax levies which in 1902 made up 84 per cent of all state and local tax collections and probably maintained an equal, if not a slightly higher, percentage in the preceding four decades. The total of these levies starting at \$94 million, or \$3 per capital in 1860, had tripled (on a currency basis) by 1870, and then rose more slowly to a total of \$725 million, or \$9.22 per capita in 1902. Thereafter the advance was more rapid, especially after about 1915, the total reaching \$3.5 billion, or over \$32 per capita, in 1922, when the total of all state and local tax collections was almost \$6.6 billion. Of this total the share of the states was over \$1.6 billion. It should also be noted that, in addition to the actual taxes, states and local units collect a large sum in the form of fees and other charges for activities representing special services, such as water rates and special assessments or charges; these added to the taxes raised the total receipts from such sources to about \$8 billion. The additional outlay for relief purposes during the prolonged depression more than offset cuts made in various other expenditures and necessitated additional taxation. In consequence total state and local tax receipts had risen to a figure estimated at \$8.7 billion for 1938 and total revenue from all sources to \$9.3 billion. Even when allowance is made for the higher price level between 1910 and 1932, the rise in the per capita levies since 1860 vividly suggests how great must have been the expansion of the activities of these governmental units during this period.

The general character of state and local taxes appears to have undergone no very marked changes until about the end of the nineteenth century. The more rapid rise in expenditures thereafter led to a search for new sources of revenue. The resulting change consisted largely in the adoption of new forms of taxation rather than in the abandonment of any of the earlier forms.

Although the general property tax on real and personal property is still relied upon to yield most of the total of state and local taxes, that proportion had declined from about five-sixths of the total in 1902 to less than three-quarters in 1932; owing to the growth of other taxes during the depression, it fell to two-thirds by 1937. Despite the many faults of this tax as it works in practice today, the chief being that so much personal property now takes intangible forms such as securities and can easily be concealed and so escape taxation, not much has been accomplished in the

way of reforms. Perhaps the chief improvement is the slowly growing tendency to provide for a separate classification of intangibles and make them subject to a much lower rate of taxation so there will be less reason for concealment, as the general property rate on intangibles often becomes almost confiscatory. Although about a third of the total revenue in cities of over 30,000 comes from sources other than taxation, the general property levy yields about nine-tenths of their tax receipts. No important new tax has been developed here, except the very few cases of a city sales tax; for a while the revenue from liquor licenses was lost during the period of prohibition. Thus it is the states with their greater powers that have been most active in developing new forms of taxation, thereby somewhat lessening their earlier heavy dependence on the general property tax.

On the basis of revenue obtained, much the most important of these newer state taxes are the motor vehicle license and the gasoline taxes, which yielded almost \$1.2 billion in 1938 as contrasted with only \$8 million in 1913. Practically all of the proceeds, however, were, until the depression, devoted to the construction and maintenance of highways. Equally recent in development has been the growth of income taxes, now levied by about two-thirds of the states and yielding nearly \$250 million in 1936, though most of this was received by only a few states. The adoption of inheritance and estate taxes started earlier than the income tax, all but eight states having some form of this tax by 1913, and all but one in 1938, when the total receipts were estimated at somewhat under \$150 million. The hesitancy of states to try to secure much revenue from this source, lest citizens establish a place of residence in a state where the tax was lower or nonexistent, was generally overcome by the provision of a Federal law in 1926, under which payments of state inheritance taxes could be deducted from the Federal inheritance tax up to 80 per cent of the latter.

The most recent tax to find favor among a number of states is some form of sales tax. Despite the objection that it tends to fall with greater weight on the poor, its possibilities of a large yield made it attractive in the depression following 1929 when other sources of tax revenue were dwindling. By 1937 nearly half the states and a very few localities were obtaining about \$400 million from this source. The last addition to important state taxes is the pay-roll tax imposed in connection with social security laws.

The Finances of the Federal Government. The Civil War, as has been seen, brought an enormous increase in the national debt. The peak was reached in September, 1865, when the total, less cash in the Treasury, was \$2,750 million. Less than half of this was funded and \$460 million was made up of noninterest-bearing greenbacks and fractional paper currency. It was obvious that measures for refunding the short-term

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obligations through the issue of long-term bonds must be promptly adopted. By the end of 1870 most of this had been accomplished; the new bonds generally bore a lower rate of interest than that on the issues redeemed and so produced a substantial saving for the Treasury.

During the controversy over this issue a strong agitation arose, centering in the West and South and culminating in 1868, in favor of paying the principal and interest of these government obligations in the current paper currency instead of in coin, at least where coin was not specified in the obligations. As gold was still at a premium, this procedure

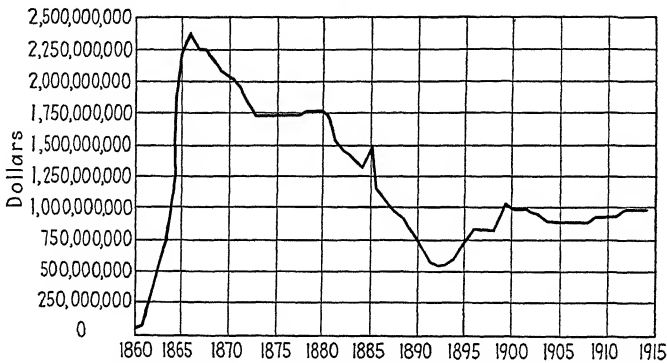


Fig. 77.—Interest-bearing public debt of the United States, 1860–1914.

would have decreased the value of government obligations and impaired its credit, for it had been generally understood that these obligations would be paid in coin. The firm stand of Grant's administration against this course of action improved government credit and greatly facilitated the refunding operations.

With the return of peace and the resultant decline in Federal expenditures, there at once arose a clamor for relief from the taxes which, by the end of the struggle, had become fairly burdensome. Through a series of acts from 1866 to 1870 the taxes on income, cotton, and most manufactures were eliminated along with many stamp taxes, and rates were reduced in most of the others. Thereafter, except for a few unimportant remainders, which disappeared in 1883, the only internal revenue taxes were those on spirits, liquors, and tobacco. Thus internal revenue taxes, which had disappeared after the War of 1812, were revived as a permanent feature in Federal finance. One gain thus secured was greater stability in the amount of revenue, the receipts from these taxes fluctuating less than those from customs duties. This together with the higher level of protective customs duties proved to be the enduring changes in the system of Federal taxation arising from the Civil War.

The total expenditures of the Federal government tended to decline to 1878. Although receipts also dropped, there was an appreciable surplus

in every year but 1874 which made possible a reduction of the interest-bearing national debt to \$1,723 million in 1880. The decade of the eighties proved a very prosperous one for the Treasury as the surplus averaged over \$100 million a year. A billion dollars of the public debt was paid off during the decade and by 1893 the interest-bearing debt had been reduced to under \$600 million, the lowest figure reached since the Civil War. Interest charges were reduced still more rapidly by the lower rates on refunding bond issues. Moreover, this was accomplished despite the temptation to extravagance on the part of Congress which the large revenue

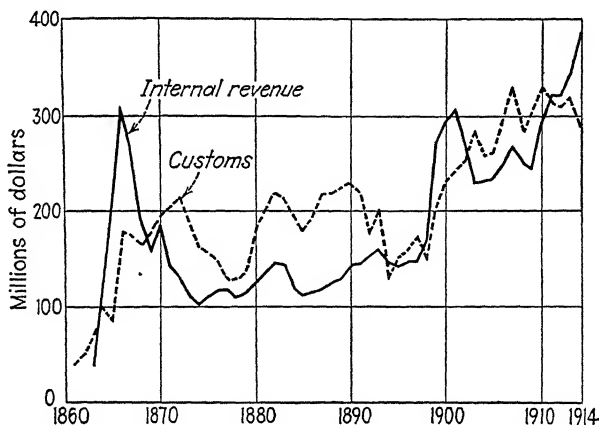


Fig. 78.—Federal receipts from internal revenue and customs, 1861-1914.

provided, leading to a rapid increase in the “pork-barrel” appropriations for public buildings or river and harbor improvements, and a doubling of the outlay for pensions.

After 1893 the fiscal situation that confronted the Treasury proved less favorable and six years of deficits followed. The economic depression combined with lower tariff duties caused a drop in customs revenue while expenditures were augmented, first by the purchases of gold and later by the outbreak of the Spanish-American War. This short war involved no serious financial strain. Congress was unusually prompt in passing the war revenue act of June, 1898, doubling the taxes on tobacco and fermented liquors, and levying various special or stamp taxes and an inheritance tax. The same month an issue of \$200 million of 3 per cent bonds was authorized and, despite the low rate, many times oversubscribed, indicating the strength of government credit. As a result of these operations the national debt rose to over \$1 billion in 1900. Meanwhile, returning prosperity and higher tariff duties increased customs receipts so that by 1902 the war taxes had been generally repealed.

The war aroused imperialistic ambitions and left a heritage of insular possessions which led to a rapid rise in the peacetime expenditures for

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the army and navy. To this were added the cost of the rapid expansion of governmental activities which marked this period, and an appreciable growth in pensions. Also this was the period of the construction of the Panama Canal; about two-thirds of the outlay of \$400 million for this was provided out of current revenue; the remainder was secured through a bond issue. Up to 1910 internal revenue receipts fluctuated around \$250 million a year and, though customs receipts rose to a level higher than ever before, averaging over \$300 million a year from 1906 to 1914, this proved barely sufficient to meet the growing expenditures.

It was evident more revenue would be necessary and, as current opinion favored a reduction rather than an increase in tariff duties, new

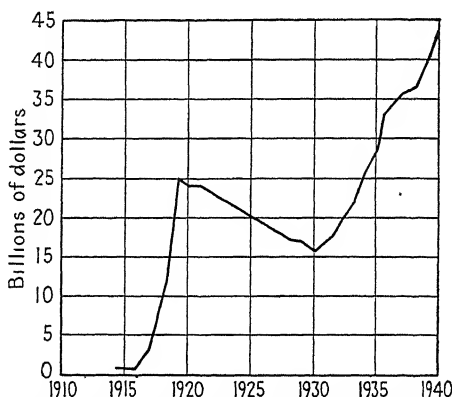


FIG. 79.—Interest-bearing public debt of the United States since 1914.

internal revenue taxes were sought. The result was two taxes new to the Federal government in time of peace—the corporation tax authorized by the Tariff Act of 1909 and the income tax authorized in 1913 after the Sixteenth Amendment of the Constitution. Though starting at very moderate rates these taxes were destined to a rapid expansion in the years that ensued. One result was that after 1910 the receipts from internal revenue regularly exceeded the receipts from customs duties. This marked the beginning of an important shift in the main sources of Federal revenue. Previously, except in times of war or the years immediately following, customs receipts had generally provided much the greater portion of Federal revenue. Before the Civil War nearly nine-tenths was derived from this source and subsequently about three-fifths; since the outbreak of the first World War customs receipts have fallen to a position of minor importance.

The effects of that war upon Federal finance were revolutionary in character. Even before the United States entered the struggle, the greater outlay for armament led to several acts increasing internal revenue taxes.

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The detailed account of wartime financing will be given in the chapter devoted to that period. Here, for the purpose of continuing the account of Federal finance and of making clear the contrast between the postwar and the prewar situation, it will suffice to summarize the main results.

From the beginning of our entrance into the war, Apr. 6, 1917, until most of the overseas troops had been returned at the end of October, 1919, the total expenditures of the Federal government, exclusive of debt operations and postal disbursements, reached the enormous total of over \$34 billion. This compares with an annual outlay of about \$700 million previ-

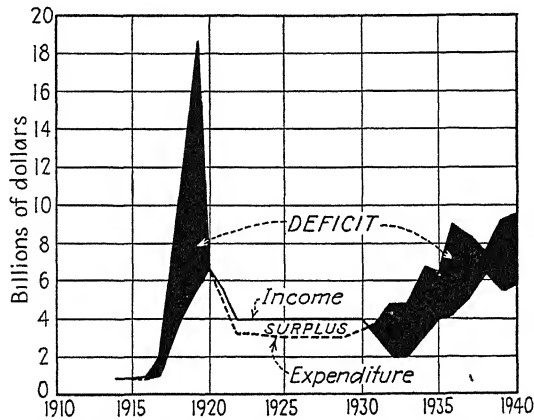


FIG. 80.—Total ordinary receipts and expenditures of the United States since 1914.

ous to the war. Of the wartime outlay nearly \$9.5 billion net was in the form of loans to the Allies.

The problem of raising these funds was met by Congress with a much more prompt and vigorous policy of taxation than in previous serious wars, so that over \$11 billion, or nearly one-third of the total outlay, was obtained through taxation. Much the greater portion of this sum was derived from the individual and corporate income tax, while a great variety of other internal revenue taxes contributed most of the balance. The remaining two-thirds of the outlay was met by borrowing in the form of short-term treasury notes and the long-term Liberty and Victory bond issues. As a result the country emerged from the war in 1919 with a national debt of over \$25 billion as contrasted with a debt of about \$1 billion in 1916. The burden this placed on the people can be better appreciated when stated in per capita figures which for 1919 were \$240 as contrasted with \$12 in 1916, nearly \$78 at the close of the Civil War in 1866, and \$2 in 1860. The lower value of the dollar in 1866 and 1919 should be kept in mind, however, as well as the dubious offset of the debt due this country by foreign nations in 1919.

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The situation faced by the Treasury at the close of the war made it obvious that there was no prospect of a return to the prewar fiscal conditions for some years—if ever. Interest on the national debt alone now amounted to \$1 billion a year, or more than the total annual outlay of the Federal government before the war. In addition there was the heavy outlay for veterans along with a considerable increase in pensions; the expenditure for the army and navy was more than double the prewar level; Federal grants-in-aid were further expanded; and the higher price level had increased operating expenditures generally. In the decade beginning in 1922 the total ordinary expenditures averaged over \$3 billion a year.

The urgent demand for relief from the war taxes, which arose when the return of peace had removed the pressure of patriotic need, was soon augmented by the economic depression of 1920–1921. In 1921 the most important changes made were the elimination of the excess or war profits tax and the reduction in income tax rates. A series of subsequent changes up to 1928 repealed most of the special war taxes and reduced the income and inheritance tax rates. As a result, by 1930 the tax on tobacco provided the only important internal revenue remaining outside of the income tax, which produced two-thirds of the total receipts from Federal taxation. Customs receipts provided one-sixth of this total, having risen under the higher duties of the Tariff of 1922 and the stimulus of prosperous times to about \$600 million a year, much the highest level ever known.

Fortunately, owing in part to farsighted administrative pressure, the reduction in taxation did not proceed at too rapid a pace to prevent the showing of a large surplus averaging \$900 million a year throughout the decade of the twenties. Contributing to this outcome also were the special receipts from various sources, such as the repayment of advances, both domestic and foreign, made by the government during the war and the sale of excess war material. This surplus made possible a rapid reduction of the national debt; over \$9 billion was paid off by 1930, thus lowering the total to \$16 billion, or \$131 per capita. Though some argued that this rate of reduction—about twice that needed under the sinking fund and other legal requirements—was too rapid, and that a faster reduction of taxes would be better, the policy, vigorously urged by the administrations in power, proved a very wise one. Its advantages were made only too evident in the fiscal difficulties that beset the government after 1930. Then, in retrospect, it could be seen that a still greater reduction of the debt during the prosperous twenties would have been advantageous.

The prolonged period of depression that followed resulted in the same marked repercussion upon Federal finances as upon state and local finances. Since a more detailed account of this will be given later, only the outstanding results will be noted here. As business slumped receipts from

income taxes, much the most important source of Federal revenue, were cut one-half to two-thirds; at the same time the expenditures involved by the various relief and recovery measures rapidly mounted. In consequence, starting in the fiscal year ending with June, 1931, a deficit of \$900 million appeared; in the period immediately following this rose to an average of \$3.5 billion a year despite increased tax levies made in a series of acts starting in 1932. Income tax rates were put back to about the level that had prevailed in 1921; estate tax rates were greatly increased and supplemented by a gift tax; with the repeal of prohibition the liquor tax was revived; a new Federal gasoline tax was provided for; and various New Deal measures led to such new taxes as the processing tax, the undistributed profits tax, and the pay-roll tax. Though government receipts rose to over \$6 billion by 1938—almost equal to the postwar peak of 1920—the continued deficits necessitated constant recourse to new borrowing so that by the autumn of 1940 the interest-bearing debt had reached over \$44 billion, an increase of \$28 billion since 1930 and exceeding that which occurred during the period of the first World War. It should be noted, however, that, thanks to low rates, the annual interest charge on this larger debt was about the same as that on the much smaller debt of 1920. The war on depression was proving much the most costly type of war which the country had ever undertaken, as far as direct outlay was involved.

Government Receipts and Expenditures Today. To follow this account of the main trends in Federal, state, and local fiscal developments since 1860, a view of the general outcome is desirable in order to obtain a picture of the present situation as a whole and make clear its chief characteristics. Such a picture is provided by the two graphs on pages 908-909 showing the main sources of revenue and forms of expenditure for the different governmental units for the fiscal year ending in 1938. It will be noted that the general property tax produced about a third of all tax revenue and went almost entirely to local government, and that the income tax on individuals and corporations produced nearly a quarter and went mostly to the Federal government, the next most important tax receipts of the latter being derived from liquor and tobacco. For the states the motor fuel and vehicle taxes provided the largest item of revenue. The total tax receipts of all governmental units was \$15 billion, or \$114 per capita, as contrasted with about \$23 per capita in 1913. Of this total the Federal government obtained \$6 billion, the local governments almost \$5 billion, and the states something less than \$4 billion. It will also be noted that, in addition to tax revenue, over \$1 billion was obtained from various sources of nontax revenue and about \$1.5 billion net from borrowing. The most significant fact of all, however, is that the total tax revenue was equal to almost 22 per

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cent of the estimated national income—in other words over a fifth of that income was being appropriated and its expenditure determined by governmental authorities.

How the tax and other receipts of the different governmental units, totaling nearly \$17.5 billion, were being used at this time is shown in the graph on this page which covers the expenditures, except debt retirement, of each unit from its own sources and excludes the outlay of each based on grants from other units. The largest item, that for “all

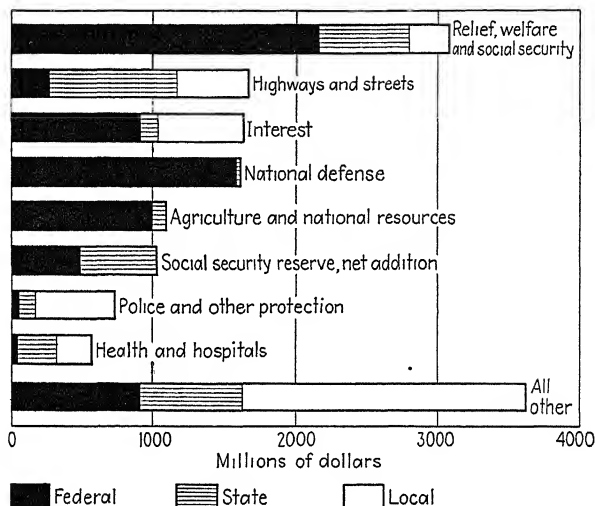


FIG. 81.—Federal and estimated state and local expenditures from own sources, 1938.
(*U. S. Treasury.*)

other” functions than those listed, covers most of the wide-ranging activities of government including nearly all those of the essentially regulatory type; yet it makes up but a fifth of all expenditures. It will be seen that much the greater portion of the total was used to provide the people with certain goods and services. For the time being the largest outlay of this type was for relief, welfare, and social security, while a portion of the outlay for other purposes might be considered as an indirect form of relief. The outlay for education, which in normal times generally exceeded any other, came next in order followed by that for highways and streets, an outlay which had risen to second rank in the period before the depression. The outlay for health and hospitals, it may be noted, is the smallest of all those listed. It is first of all to secure better provision for this function that any considerable future increase in public expenditures in normal times of peace is to be looked for. Immediately, the fear aroused by the war in Europe will involve an outlay for purposes of national defense which is rapidly assuming fairly staggering proportions. The

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paramount fiscal issue involved will be the willingness of the government to meet as much as possible of this outlay by drastic taxation.

Some Features of the General Situation. The large proportion of all governmental expenditures used for education, highways, health and, of late, relief and social welfare is obviously a fact of great importance as it reacts upon the distribution of income and the standard of living of different economic groups. The marked trend toward a relatively larger

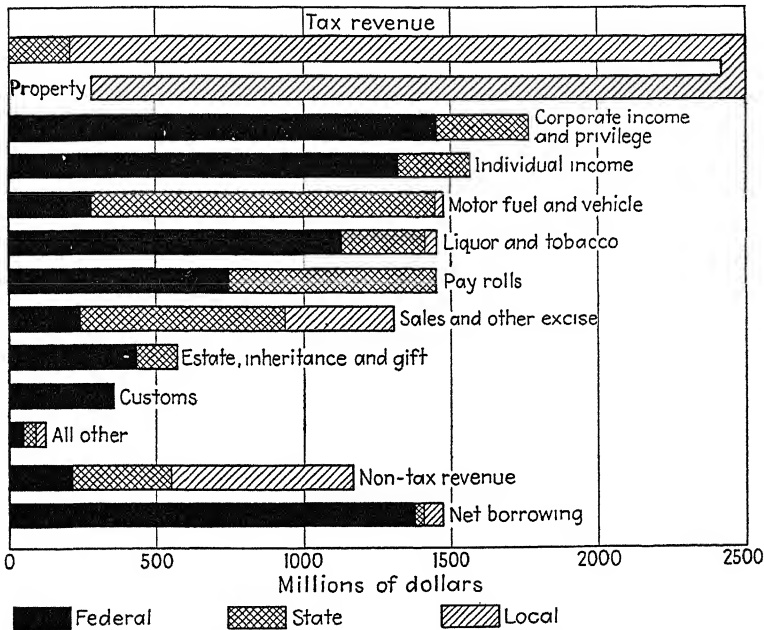


FIG. 82.—Federal and estimated state and local receipts, 1938. (*U. S. Treasury.*)

outlay for such purposes, so evident even in the four decades preceding 1930, is most significant of the growing concern about these matters. This has been a product of the rising democratic and humanitarian spirit and of discontent with the great inequalities in the distribution of wealth and income. The result has been to provide for the masses, on a vastly more comprehensive scale than ever before, certain goods and services deemed especially important for social well-being that they could not otherwise have obtained, thus appreciably raising their standard of living. Moreover, to a very considerable extent, it has been done at the expense of the more well to do and the rich.

This trend toward heavier taxation of the rich and the popular favor which it has met raise questions as to how far it can go and as to the distribution of the general burden of taxation among different economic classes that has resulted from the rather unsystematic development of

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the tax systems as a whole. The amount of the total tax burden that the rich, or even the well to do, could bear is often exaggerated. It needs but a glance at the figures to see that inevitably a considerable portion of that burden would have to fall on the middle classes. According to the estimated distribution of aggregate income (including that imputed from owned homes and family production) for 1935-1936, the total income of all those receiving \$10,000 or more was about \$7.5 billion or only half our total tax revenue in 1938. To obtain \$15 billion from the aggregate personal income of the upper income groups in 1935-1936, it would have been necessary to take almost all the income of those receiving over \$3,500 a year. Actually, however, this somewhat exaggerates the picture as to how far it would ordinarily be necessary to go, partly because private income was still subnormal in those years and partly because the abolition of the various other forms of taxes which this system would make possible would provide an appreciable addition to the income of this group. Yet such additions would be partly offset if it were decided that this group should be allowed to retain at least enough income to live on; it might well be far more than offset if the imposition of such levies had a serious reaction on production in general. It is therefore clear that even the most extreme measures would not suffice to provide the tax revenue now needed without imposing an unbearable burden on a large portion of the middle class as well as on the rich.

How this present burden is actually borne in the last analysis is a question that cannot be answered with any pretense to accuracy, though we can obtain a fair impression of the general situation. The chief uncertainty arises from the inability to determine the extent to which numerous taxes, which as a group probably yield around one-half of the total tax revenue, are shifted to others by those upon whom they are levied. The most careful recent study, that made for the Twentieth Century Fund¹ and based on estimates for different classes of individuals in New York and Illinois for 1936, came to the conclusion that the tax system as a whole was regressive for the lower income groups up to an income of around \$2,000 a year, and distinctly and increasingly progressive for the higher income groups, rising to the point around \$100,000 income where it took at least half, and at higher levels a considerably larger percentage, of income. The progressive factor in the system is due chiefly to income and death taxes and to a development of the last three decades. The regressive feature is mainly a product of the shifting of various taxes so that they add to the cost of goods bought by the masses.

According to this study the total tax burden of farmers receiving an income of \$500 in these two states might vary from \$56 to \$105, while those receiving \$2,000 would face a burden of from \$163 to \$277. Similarly

¹ Twentieth Century Fund, "Facing the Tax Problem," New York, 1937.

wage earners receiving \$1,000 might be under a tax burden of from \$147 to \$190, while in the case of those receiving \$2,000 it lies between \$256 and \$359. For a salaried person receiving \$5,000 the burden would range from \$915 to \$1,089; for a merchant with the same income it would be distinctly higher. Apparently the group that is least hard hit by the general tax burden is that with incomes between \$5,000 and \$50,000. It thus appears that, as far as an equitable distribution of the general burden of taxation is concerned, the reform most needed is the elimination of the regressive feature among the lowest income groups and the shift of a larger share of the burden to groups in the middle range of incomes.

A relatively recent development in our fiscal history, though having precedents in pre-Civil War days and one that has become much more prominent since 1930, is the growth of intergovernmental grants of funds for various specified purposes, commonly spoken of as grants-in-aid. For the fiscal year 1938 these totaled over \$2.2 billion, about two-thirds consisting of state grants to local governmental units and most of the remainder of Federal grants to states. Until the depression, since when grants for relief purposes have been important, most of these funds have been used for education and for highways. In the case of Federal action in particular, these grants have often been employed to induce the states to make greater provision for such purposes or to establish higher standards. One consequence has been an appreciable increase in the power exercised by the Federal government, but the net results have been most beneficial. Of the various ways in which the Federal government, and to a much less extent the state governments, has sought to employ the taxing power for purposes of regulation and control rather than to secure revenue, as illustrated by the tax on state bank notes and protective tariff duties or the abortive effort to check child labor, nothing need be said here since the more important cases have been noted elsewhere. The use of the taxing power for such purposes has generally been severely circumscribed by the courts.

Not a few of the defects in the present tax system, taken as a whole, go back to the division of powers between the Federal government and the states. Too frequently each authority has gone its own way regardless of what the other was doing; this has resulted in little coordination, in double taxation, and in lack of balance generally. Competition among the states and fear lest a tax imposed by a state put it at a disadvantage as compared with others have often prevented desirable fiscal action, though occasionally the Federal government has been able to get around this obstacle. The fact that a considerable portion of the taxes is levied and collected in such a way that those who really have to bear the burden are not conscious of what the burden is tends to weaken the demand for

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economy and fiscal reform generally. A system that led to a greater degree of tax-consciousness might well promote certain reforms.

In fiscal administration this period brought some improvements. One of the most important was the general introduction of the budget system, the climax being its adoption by the Federal government in 1921. This generally promoted both economy and a better balanced distribution in expenditures as well as a closer adjustment of outlay to income and a more farsighted fiscal policy. Among the states, the move to establish permanent tax commissions was also productive of numerous improvements in tax administration.

Summary of the Economic Development since 1860. This chapter concludes the survey of the chief branches of our economic development since 1860. As the three following chapters covering the first World War, the postwar decade, and the depression will be concerned only with the general aspects of the dominant problems confronting the country during those years, we can best present here the general summary of the most significant developments in the country's economic history since 1860. The points most stressed, as heretofore, will be those of especial significance for their bearing upon the effort to raise the standard of living of the people.

The nation's supply of natural resources received no such additions from the acquisition of new territory during this period as had been secured during the preceding period. The purchase of Alaska, the resources of which are not yet fully explored, has thus far proved significant chiefly for the fisheries and gold. The insular possessions acquired provided various semitropical products which well complemented the nation's resources, the most important being sugar, manila hemp, tobacco, and copra; domestic interests, however, have shown a desire to limit the potential gains from this source. The acquisition of the Canal Zone, facilitating the construction and control of the Panama Canal, ensured a great improvement in transportation facilities. Within the former continental boundaries further exploration, aided by scientific advance, led to the discovery of both new and additional important resources, notably oil, copper, lead, zinc, silver, and gold. Technological improvements gave value to many resources theretofore useless.

The labor supply, as far as determined by the growth of population, continued to increase but, for the first time in two centuries, at a steadily declining rate which, after 1910, was but half, and after 1930, but a fifth of that prevailing before 1860. This resulted, despite a decline in the death rate, from the marked fall in the birth rate and the drastic restriction on immigration. Although the intensity of work was greatly increased in most occupations, the hours of work per week were cut nearly one-

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third, even before 1930; the individual's years of toil were appreciably reduced, chiefly by the prolongation of the period of training. The remarkable expansion of the provision for general education and the increased opportunities for vocational and professional training greatly improved the quality of labor in nearly every occupation. Yet, despite the widespread introduction of laborsaving devices, the demand for labor was such that, as compared with other countries, this factor of production still remained relatively costly.

In the case of the factor, capital, however, this period witnessed the ending, at the time of the first World War, of the relative scarcity which

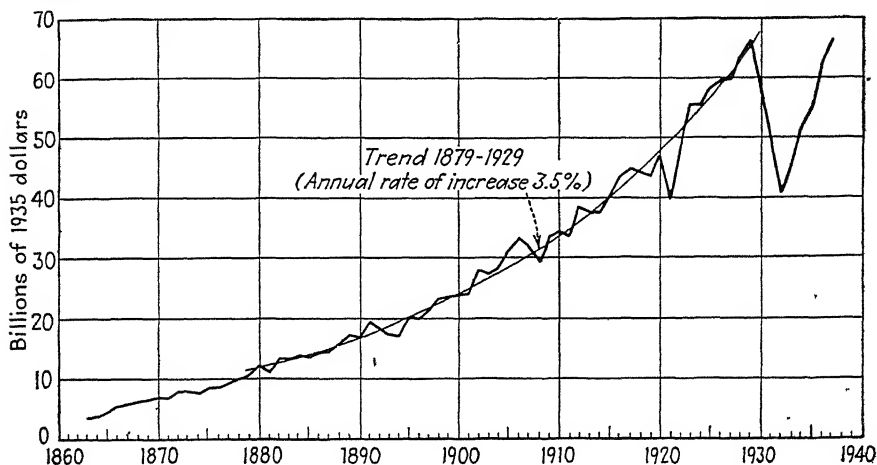


FIG. 83.—Total production in the United States, 1863-1937. (*National Resources Committee, "The Structure of the American Economy."*)

had theretofore prevailed. Though the inflow of foreign capital continued up to that time, the enormous increase in the domestic accumulation resulting from the growth of the savable fund and the various developments reacting upon the effective desire of accumulation were such that capital began to flow out and the country became a creditor nation. In view of the growing importance of capital as a factor of production the ending of its relative scarcity was all the more significant. For the same reason the growing power of those in control of capital and the extent to which that control, facilitated by various corporate devices, became concentrated, attained increased significance. It is because of these developments that this period is sometimes said to mark the transition from what is called "industrial" capitalism to "finance" capitalism. But, in addition to the steadily mounting per capita quantity of capital goods which each generation handed on to the succeeding generation, and of still greater significance, was the enormous improvement in the quality of those goods produced by the progress of science and invention and

embodied in better machinery, plants, transport facilities, etc. This progress, also significant for its reactions upon the other factors of production and the structure of the economic order, may be considered the greatest contributor to the rising standard of living.

In the case of the factor, business management, the underlying conditions that had favored the development of an able group of leaders during the previous period still generally remained operative. This resulted in the emergence of the so-called captains of industry, a group that in certain fields, such as manufacturing, transportation, communication, mining, and marketing, came to be regarded as world leaders whose methods were studied by foreigners. As the use of the corporate form of business organization spread and, in the case of the larger companies, the separation between ownership and management became more marked, new problems arose, such as how to ensure the incentives for managerial efficiency and how to protect the interests of absentee owners. As the size of the business enterprise grew, the problems of management became increasingly difficult. Whether executive ability grew in proportion to the growing need it would be hard to say; but the common recognition of the need for such ability was reflected in the constant search and keen competition for men of proved capacity—there was always room at the top. In meeting these growing demands entrepreneurs as a group benefited by the increased provision for general education and in time professional training in business management was made available for those in a position to take advantage of it. In addition, the developments in cost accounting, statistical technique, personnel administration, and other phases of scientific management provided new and better means for attacking many of their problems in a more systematic manner.

Of the progress made in the various sciences, natural, biological, and social, almost nothing has been said in the preceding chapters except to note a few of the discoveries and inventions of particular economic significance. It must not be forgotten, however, that the advances in these fields, especially the first two, were the basis upon which much of the economic achievement of the period was ultimately founded. The cumulative effects of these advances brought results unequalled in any similar period in history. Among the social sciences, these years witnessed the rise of social psychology and sociology and saw political science devote more attention to the applied problems of politics and public administration. Economics refined or revised the formulation of its laws and gave more attention to the institutional background in studying the concrete problems with which it was confronted. Despite the fact that this subject for the first time became an important field of study among the institutions of higher learning, the results, though appreciable, fell much short of what could be desired. This may be charged to the difficulty of many

of the problems in this field, the ignorance of the masses concerning the issues that arose, and the power of pressure groups heedless of the common weal.

The trend of development in the framework of the economic order within which the factors of production were combined was along the general lines indicated by the dominant trends during the preceding period when the outstanding characteristics of modern capitalistic industry were becoming increasingly evident. Continuing an agelong trend, that towards greater specialization of functions and division of labor was one of the most pervasive of the times and the results were reflected in almost every line of economic activity. The widespread trend toward integration, which brought a more varied range of economic activities under the control of a single business enterprise, was in part based on the desire to secure more effective coordination and control of the productive processes; but within the integrated concern the trend toward specialization was equally in evidence. In the use of the factors of production this trend led, in the case of natural resources, to a better territorial specialization, among not only different sections of the country but also different parts of the world. Despite the various counteracting moves so much in evidence of late, the economic life of the country became increasingly tied up with developments in the rest of the world. In the case of the factor, labor, it was reflected in the growing importance, as compared with common labor, of the semiskilled and skilled groups, as well as in the rapid increase of those in the various professions; the same trend was obvious in the case of entrepreneurs. In the case of capital it resulted in the far more highly specialized forms assumed by plants and machines. In addition the same trend was in evidence in the more specialized character assumed by the various institutions that made up the economic order.

Fundamentally specialization was a product of technological progress and the widening of the market. The notable technological advance that marked this period has already been mentioned. Its results as applied in the fields of transportation and communication were chiefly responsible for the rapid geographical widening of the market. Though water transport costs were greatly reduced as the steamship was improved and deep waterway channels were constructed, the greatest gain came to those regions dependent upon overland transportation; for it was largely during this period that the revolutionary effects of the introduction of railroads were experienced both in the United States and elsewhere. The comparatively recent advent of the motor vehicle was chiefly significant as a means of passenger transport and for local or regional rather than for long-distance commodity movements. In communication, besides the improvements in the older facilities such as printing, the post office, and the telegraph, this period witnessed the advent of the permanent cable, the

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telephone, and the radio, offering a speed, a range, and an ease of facilities that immediately became essential features of the economic and social orders.

The character of the marketing organizations was inevitably reacted upon by the developments just noted. Generally speaking, however, the progress made in this field, owing to the limited chance to introduce machine methods, seems to have been productive of less striking gains than in some other fields—a fact which enabled the older or “regular” channels of distribution to continue with less modification than might otherwise have been the case. The more significant changes were the growth of large-scale retailing, as represented by the department store, the mail-order house, and the chain store; the spread of commodity exchanges; the decrease in the number of middlemen, bringing the producer into closer connection with the consumer of his product; the assumption by the producer of more of the functions of distribution; and the marked expansion of advertising. As a result of these changes, the process of distributing goods (including their transport) became a more important element in the economic order and its costs tended to absorb a greater proportion of the total cost of goods to the final consumer.

In the field of financial institutions the period brought various developments, many of them distinct contributions to the economic order but some that created problems of a serious character. The chaotic and insecure condition of the circulating medium, characteristic of the preceding period, was ended by the substitution of the sound national bank notes for the uncertain state bank notes and the maintenance of a normally adequate supply of specie after the greenback period. Thereafter the different forms of money were maintained on a parity with the standard, which was a decided gain; however, the standard itself did not escape marked fluctuations in value. Moreover, the rapid growth in the use of bank credit in the form of deposit currency greatly added to the difficulties of the situation and made credit control one of the most serious economic problems of the time. Effective action in dealing with this and other problems was hindered by the decentralized banking system with control divided between the Federal government and forty-eight states—an obstacle that was only in part overcome by the move towards greater centralization involved in the adoption of the Federal reserve system. The rapid rise of the trust company offered a wide range of financial services and, more recently, the long overdue creation of the various specialized institutions to meet the need for agricultural credit provided improvements.

The enormous increase in the output of corporate securities was facilitated by the rise of investment bankers and the better organized and regulated markets provided by the stock exchanges. Unfortunately the

growing number of those investing in such securities were afforded far too little additional protection, and the recent appearance of the investment trust, which has a sound function, was too frequently seized upon by the unscrupulous as just another device to get control of other people's money for purposes of private manipulation.

Through the development of new forms of insurance, to provide against a far greater variety of business risks than ever before, a decided advance was made; the widespread adoption of life insurance during this period and the very recent general provision for industrial, accident, and unemployment insurance together with old-age assistance were especially beneficial for the masses. Through these and other developments the accumulation of capital was stimulated and a much greater mobility in the flow of lendable funds was secured, thus increasing the likelihood that capital would be diverted to the most productive uses. The outstanding problem still confronting the country in this field involved the relationship of monetary and banking policies to the business cycle.

The general outcome of all these rapid changes was what is often spoken of as the flowering of modern capitalism, which may be said to have occurred in the sixty years or so centering about the turn of the century. This was characterized by the large scale of business enterprise that came to dominate a vast range of economic activities; by the very general adoption of the corporate form of organization in these fields and the accentuation of the corporation problem; by the sharpening of the conflict between labor and capital; by the marked growth in the importance of capital as a factor of production and the consequent increase in power over large enterprises of those possessing or controlling its flow; by the growing ferocity of competition along with the marked swings of the business cycle and the resulting effort to prevent, or at least modify, the consequences of both through resort to various methods for checking competition among laborers as well as producers.

Finally, the new problems created by these rapid changes, combined with a growing concern over the rising power of concentrated control over capital, the increasing inequalities in the distribution of wealth and income, and the consequent fear that the ideals of a democratic social order were endangered, led to a rapidly increasing extension of activities on the part of the state in the effort to check or eliminate these evils and to protect and foster these ideals. Thus during this period the relatively unrestricted freedom of individual initiative and enterprise, along with certain of the rights of private property, was substantially modified by innumerable measures that involved an expansion of social control and were deemed essential to maintain the efficient functioning of the increasingly complex economic order and to foster the ideals of the democratic republic.

Essentially this expansion of social control represented an effort to secure a better adaptation of the framework and the functioning of the government to the evolving economic order. As a result of the speed with which the economic order was being changed, and the slowness that marked legislative and constitutional changes, this effort was beset with difficulties; and the adjustments achieved typically lagged far behind the needs of the time. The outcome of the Civil War, by preserving the unity of the nation, was of the utmost economic importance. Thereafter, unlike the preceding period, there never arose any serious threat of secession when the economic interests of some section seemed likely to be injured by Federal action.

Though the conflicting interests of different sections still played a prominent role in shaping much legislation, the trend of economic development, based on an essentially national economy with a growing interdependence among the different sections, gave increased economic support for political unity. This same economic trend tended to make a large number of the problems that arose essentially national in character, and hence such as could be effectively dealt with only by the Federal government rather than by forty-eight states with all their varying interests. Moreover, the government operated under a Constitution difficult of amendment and little altered since it was drawn up in 1787 when its provisions granted the Federal authorities the very minimum of powers then considered essential for its success. That it could still be used without more serious consequences, thanks in part to the element of elasticity in its interpretation, was the greatest tribute to the wisdom of those who formulated its articles. There would be few to claim that it had been quickly responsive or become ideally adapted to the new economic order. A similar difficulty, though less marked in degree, appeared in the field of state government; here an added obstacle to advance arose from competition among the states, which so frequently delayed desirable legislation. Thus the problem how to secure a speedier and better adaptation of the political order to the economic order still faces the nation.

Despite the new problems and threatened dangers, it is clear that this period could lay claim to a notable economic achievement. Aided by a most favorable combination of circumstances, it saw the nation rise from a position none too eminent among the powers of the mid-nineteenth century to a position of economic and political preeminence among those of the twentieth century. Of much greater significance in its basic contribution to the well-being of the people, it saw their standard of living raised to a point unequalled by that of any other great nation in the history of the world. Despite its manifold defects, the economic order had succeeded in providing means for such ends as the people might choose to use them

in unparalleled profusion, as well as far more leisure in which to enjoy their use.

At the moment, in a state of mind induced by an abnormally prolonged and severe depression and aggravated by the chaotic world condition, this achievement may seem less certain or desirable. Yet a better knowledge of the lower standards of living in other nations, augmented by the keener sense of historical relativity to be derived from a review of the previous experiences of an essentially similar character through which the nation has passed, not infrequently with resulting benefit, may help to provide a less gloomy outlook upon the future.

CHAPTER XLII

ECONOMIC ASPECTS OF THE WORLD WAR YEARS

Introduction. In the preceding chapters dealing with the various fields of economic activity in the period since 1860, there have been noted for the sake of continuity in treatment the more important developments in each field during the years of the first World War. These scattered bits, however, give no adequate conception of the broader problems that the country faced in the effort to mobilize its economic resources for carrying on the war. It is the purpose of this chapter, therefore, to try to present the problem as a whole: indicating its size and general character, suggesting the intricate interrelationships among the different fields of economic activity with the extensive coordination necessary to attain the desired results, and explaining the organization and methods actually adopted.

The problem was of such a size as to involve the whole economic order; so, incidentally, the attempt to explain will serve to emphasize many of the outstanding features that have come to characterize that order today. As it was the most comprehensive effort at social planning the country had ever engaged in, the experience throws light upon what is involved in such planning. It will be of interest, too, to compare the methods used in meeting the problems of this war with those employed in our earlier wars to see how much had been learned from past experience and how the changing economic order had altered the character of the problems as contrasted with earlier times. Furthermore, since the "war to end war" failed to accomplish that much desired end, it is vitally important to discover what we have yet to learn in this field.

As has previously been indicated, the outstanding economic problems that face a country in time of war may be classified under three general heads: (1) securing the goods and services necessary for carrying on the war; (2) securing the funds required to pay for these goods and services; (3) providing for the economic needs of the civilian population. Both the size and the complexity of all of these problems have been greatly increased by the methods and conditions under which modern warfare is carried on. Just as in the case of most economic activities, so warfare in modern times may be said to have taken on a mechanical character—mechanical in the sense that it requires an enormous quantity of material

goods which have to be provided through an extremely elaborate and complicated technological and economic mechanism.

Moreover, this mechanism has to function in the complex interdependent order of modern industrial society. As the then Secretary of War, Newton D. Baker, subsequently said, "To a greater extent than we or anybody else had realized, modern war is essentially an industrial art."¹ In modern warfare mere man power counts less than ever before; increasingly war has become a struggle dependent in its outcome upon machines, economic resources, and the efficiency with which these resources are coordinated and made available at the battle front. To achieve this requires not only vastly more elaborate and farsighted planning as well as greater extension and concentration of governmental control, but also the active support of a far larger portion of the civilian population than ever before. The failure of Russia with all her man power and raw materials to count for more, together with her eventual collapse, well illustrate the importance of these points. How these characteristics created problems in our own conduct of the war will be seen in the account that follows.

Developments in the Years of Neutrality. The war had been in progress for nearly three years before the United States abandoned its position of neutrality and entered the conflict on the side of the allied powers. During this period, however, developments were such as to put our country into a better position for entering effectively into the conflict when the time came. In the first place, the warring nations had turned to the United States for foodstuffs, munitions of war, and other supplies needed to augment their own resources. This tended to divert economic resources to the production of wartime necessities. At first this proceeded slowly, since many assumed the war could not last much over a year and they did not want to make heavy investments in plants when the demand for the product might soon disappear. But as the war dragged on and the lure of enormous profits rose, the movement was accelerated. As a result in 1916 the country was able to produce for export considerably over \$1 billion worth of war munitions. Though the production of most other war supplies increased much less rapidly, the country was in a considerably better condition to provide for its own needs in 1917 than would otherwise have been the case.

In the second place, as the return of peace grew more distant and foreign complications increased, the country slowly came to a realization of the fact that it might be drawn into the war and so began to make its own preparations. The position in which the United States found itself as a neutral was in some respects similar to its position before the War of

¹ FROTHINGHAM, THOMAS G., "The American Reinforcement in the World War," p. x, New York, 1927.

1812. Its commercial rights as a neutral were violated by both England and Germany while the submarine activities of the latter took toll of the life of its citizens as well.

A long series of official protests secured no appreciable change in England's increasingly strict policy and only temporary modification of the German submarine activities. The renewal of the latter became the immediate cause for the declaration of war, Apr. 6, 1917. Sensing the drift of affairs as the international situation steadily grew more serious, the government rather slowly moved toward greater preparedness. In the summer of 1916 laws were passed providing for an expansion of both the army and navy and creating the Council of National Defense. Additional legislation provided revenue to meet the growing expenditure involved.

The Council of National Defense was composed of the heads of six departments, all members of the cabinet, and its broad function was stated as "the coordination of industries and resources for the national security and welfare." It was to direct investigations and make recommendations to the President and heads of departments, but its powers were advisory only. There was also created an Advisory Commission to the Council made up of seven members who were to be experts in the different fields of activity with which the council was most concerned. This commission, which first met Dec. 7, 1916, came to be the effective initiating and working group in the Council. Yet it was only four months before the declaration of war that a real beginning was made in the tremendous and vitally necessary task which confronted the council.

When it is realized that this task involved little less than an examination of all the available resources for producing and transporting the vast quantity of supplies which the government would have to obtain from private business and the planning of means for the speedy and efficient mobilization of these resources and facilities, it seems scarcely believable that almost nothing had been done upon this problem theretofore. The economic history of previous wars had shown time and time again the disastrous results of neglect of the economic planning for war and it was obvious that in twentieth-century warfare the problem would prove vaster, more complicated, and more vital than ever before. But the lessons of history had not yet been learned. True, some government and army officials had urged the organization of a body with functions somewhat similar to those of the council as early as 1910 but Congress failed to pass the necessary law. Thus war was upon the country before scarcely a beginning had been made in attacking this vital economic problem. Yet it was out of the Council of National Defense and its Commission that most of the special governmental bodies organized to deal with the problem were destined to evolve.

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The War Situation and American Resources. At the time the United States entered the war the outlook for the Allies was by no means favorable and was soon destined to assume a still less promising aspect. The unrestricted submarine campaign was sinking shipping faster than it was being replaced and threatened to create a desperate situation, especially for England. The 1917 operations on land, of which much had been expected at the first of the year, failed to secure most of what had been hoped for. Finally, the outbreak of revolution in Russia and her withdrawal from the conflict at the end of the year released troops and supplies for the other fronts and helped to make possible the great final offensive of the Central Powers on the western front in 1918 which proved to be the climax of the war.

Under these circumstances it was obvious that if the United States was to exert any appreciable influence upon the outcome of the war, speed in getting men, naval vessels, and supplies into the line of action was of the utmost importance. Moreover, the scale on which these were provided must be enormous. Money was also sorely needed by the Allies to pay for the supplies they were buying in this country, since their resources for obtaining loans from private sources were rapidly dwindling; but this the government could provide generously and speedily with comparative ease. Above all, transport facilities were essential for men and supplies had to be carried across the ocean; yet suitable ships were scarcer than almost anything else.

The potential resources of the United States for meeting these needs were great; the main problem was how these resources could be made available in the form, at the time, and in the place where they were needed. The existing navy, being relatively strong, was the branch of the service best prepared to meet the call made upon it, at least as far as fighting ships was concerned. It was able immediately to contribute ships to be used in fighting submarines and in protecting transports. The existing army on the other hand was extremely small, consisting of 200,000 men, two-thirds of them constituting the regular army and one-third being members of the national guard who had been called into Federal service temporarily for duty along the Mexican frontier. Yet the man power in the total population that could be drawn upon was enormous; over 24 million eventually registered under the selective service laws, while before the end of the war 4 million men had seen actual service in the army, over half of them in France. The real problem here, therefore, was to select and train the new soldiers and get them overseas. At the start, however, nobody anticipated sending any such number of men abroad as finally went. The Germans thought the reinforcements from the United States would be negligible and not even the Allies expected much over half a million.

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As for raw materials necessary for the production of war equipment, the country was in the fortunate position of possessing most of them in abundance. Where it was necessary to fall back upon foreign sources, as in the case of rubber, the main difficulty was the scarcity of shipping. The shortage in the domestic supply of nitrate and other chemicals could in time be overcome by the introduction of new processes for their manufacture; but time was lacking. The main problem in getting equipment thus became one of developing the required producing capacity as quickly as possible and then providing cargo space for shipment overseas. The increase in the country's output of foodstuffs that was required was naturally far less than that in the case of war munitions. Men in the army required appreciably more than the same number of civilians, to say nothing of the wastage in warfare, but the chief increase in demand came from the growing dependence of the Allied countries on American sources of supply. Since production of foodstuffs depended upon millions of scattered small-scale farmers, the problem here was to stimulate them to increase their output, check unnecessary waste, and provide adequate shipping facilities.

There was no form of resources where the United States was better equipped to provide immediate reinforcement for the Allies than that of finance. The national wealth far exceeded that of any other single nation; the estimated national income in 1914 exceeded that of the United Kingdom, Germany, France, and Italy combined. The government's credit was of the strongest and could be used at once to secure the funds necessary for its own expenditure as well as for loans to the Allies. The problem was to divert to the government or to private enterprise engaged in essential activities the needed lendable funds and to maintain the government's credit by adequate taxation, all with the minimum of disturbance to normal business.

All these resources of the United States would count for nothing, however, unless transport and cargo ships were available; not even financial resources were of any use unless ships were at hand to carry overseas the goods and men which these resources provided. Yet in suitable shipping the United States was weak. The same was true of the existing facilities for ship construction, though practically all the most essential raw materials required were produced in abundance within the country. Here the problem was to construct adequate shipyards and increase the manufacture of the products required for shipbuilding. Although the very nature of these processes inevitably took considerable time, the utmost possible speed was absolutely essential.

Thus the potential resources that the United States was able to contribute were great. But to make most of them quickly effective they must be conserved and mobilized, and to do this efficiently required elaborate

and farsighted planning and necessitated the development of an extensive organization and a highly centralized administration with sweeping powers. This in itself was a very difficult task, not to be accomplished over night. In fact, it was not adequately worked out before the war ended.

The Problem of Economic Mobilization in Its Broader Aspects. It was obvious that the usual peacetime methods and organization were totally inadequate to deal with the problem of economic mobilization for war in an efficient manner. War necessitated a shift of the producing resources of the country to new lines of production on an enormous scale and with the utmost speed as well as economy. In times of peace the shifts that occur in an individualistic economic order are brought about by changes in price and profit levels. As demand for a product grows the price tends to rise, profits increase, and more resources are diverted to the production of the commodity. Such peacetime shifts are constantly going on, but they seldom bulk large at any one time nor is speedy action ordinarily important.

The very enormity of the shift arising from the war greatly increased the difficulty of the problem. How great this shift was is suggested in a very crude way by the fact that the increase in the expenditures of the Federal government during the fiscal year 1917-1918 over the prewar level was about equal to a fifth of the estimated national income for that year. Except for the greater portion of the expenditure for food, most of this increase represented more or less of a shift in the kinds of goods and services that would otherwise have been produced. From innumerable different sources, therefore, there arose a demand for various raw materials, labor, capital, and entrepreneurship. To provide for these needs the existing supplies must be conserved and used only for the most essential purposes by some system of rationing under authority. Furthermore, among the many things needed some were more urgently required than others and hence a system of priorities was essential to ensure that these needs were provided for first of all. This also required planning and the use of authority such as did not exist in the peacetime individualistic economic order.

Another danger arose from the independent action of different governmental units or those of the Allies, each proceeding in ignorance of what the other was doing, often competing with one another, and creating hopeless tangles. Thus it was found that contracts for manufacturing various commodities in a certain city had been made such that while any one contract might have been fulfilled without difficulty it was impossible to fulfill them all because the city did not have the necessary facilities to house the required labor or to transport the products in and out. In short what was needed was a complete survey of the war requirements; an

inventory of the available raw materials, labor, and facilities, for producing, transporting, and distributing the commodities; and a coordinated plan to secure efficient use of these resources. But such a survey must cover not only the resources of the United States but those available to all the Allies as well. On the economic as well as on the military battle front cooperative planning and action were essential.

Another type of problem arose in connection with the government's purchases of supplies. The demand for many things was not only enormous but urgent; the supply was limited. Obviously those who controlled the available supply were in the strategic position of a temporary monopoly and could charge exorbitant monopoly prices. This was made the easier since the purchasing power of the government, unlike that of private individuals, was almost unlimited, thus practically removing what is ordinarily the most effective check on high prices. Legally those engaged in a private business had the right to charge any price they pleased and so could easily take advantage of the government's dire need. The question was whether this could wisely be permitted and, if not, how to prevent it. There were two main reasons for not permitting it: (1) To do so would obviously greatly increase the cost of the war to the government and this added cost would sooner or later be borne by the people in the form of higher taxes. (2) It was clear that to allow certain individuals remaining safely at home to reap enormous profits while others were being called upon to sacrifice life itself at the battle front would have an extremely bad effect upon the public morale as well as upon that of the fighting forces. This reason alone was amply sufficient to justify governmental interference.

Just what line of action should be taken was a more complicated problem. The most extreme would have been widespread governmental conscription of the required properties with a reasonable compensation for their use. In fact, considerable power to take over private property was granted to the government; but it was generally found unnecessary to use it, except as a threat, because other powers given the government enabled it to put enough pressure on private business to obtain what it wanted without resort to conscription of property, though in the case of railroad transportation and a few other instances the government was eventually forced to this extreme.

Even in many lines of private business the interference with freedom of action was very often extensive and in its practical results came nearer to conscription than is commonly realized. In a few industries where highly concentrated production was possible, the government could supply at least a portion of its needs by erecting its own manufacturing plants, as it did in the cases of nitrate and shipping; but this was not generally practicable. The usual method adopted in the case of staple

products was price fixing; for unstandardized products, contracts, often on a basis of cost plus a fixed percentage of profit, could be employed. These methods were in a sense supplemented by a system for taxing excessive profits. Price fixing, however, is a very complicated undertaking, owing to the endless interrelationships of prices, and in the war period of rapidly changing prices the difficulties faced were greatly enhanced. The problem was, while maintaining reasonable relationships between closely interconnected prices, to fix the price of a given commodity at a point that did not permit of exorbitant profits and yet provided enough stimulus to individual enterprisers, despite the abnormal risks of wartime production, to induce them to turn out the goods that the government needed.

By keeping in mind these broader aspects of the problems of economic mobilization for war, we shall gain a clearer understanding of the measures employed to meet them. Since the problem of securing the goods and services required for war and the problem of providing for the needs of the civilian population were closely interconnected and commonly were worked out by the same administrative bodies, no sharp separation between them will be made in the treatment. The third problem, that of financing the war, and the integrally related developments in money and banking will be explained separately. As a detailed account of the means and methods employed for meeting these problems would fill many volumes, all that can be attempted here is to indicate in a general way the chief wartime organizations that were set up and the lines of action adopted. It will be seen that the organizations were evolved pragmatically from the necessities of the situation as experience and mistakes indicated what was required and that, throughout, the whole tendency was toward greater coordination of direction and increasing centralization of powers.

The Council of National Defense. We have previously noted that the Council of National Defense and its Advisory Commission, authorized by the act of Aug. 29, 1916, was the body out of which many of the most important wartime organizations evolved. The two bodies were formally organized Oct. 11, 1916, and each of the seven commissioners was assigned to a special field covering transportation, engineering and education, munitions and manufacturing, medicine and surgery, raw materials, supplies, and labor. The broad idea of the council, which possessed only advisory powers, was to serve as a center of contact between the government and the industrial life of the nation. For some months thereafter conferences and discussions helped to evolve a plan of organization and definition of purpose, but little action otherwise. At the end of February, 1917, a board was set up to establish standards for the manufacture of munitions of war and a month later was enlarged into the General Mu-

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nitions Board with the function of coordinating the buying of munitions so as to prevent competition among the different governmental purchasing agencies and too great localization of orders which arose from their acting independently of one another.

The Advisory Commission secured the formation of a large number of committees of producers and manufacturers dealing with commodities which entered into war needs, each committee being designed to analyze the productive resources of its industry and to serve as a medium through which the government could plan and negotiate for the industry's products. In February the commission took the initiative in estimating what material would be required to equip an army of 1 million men, since no satisfactory figures were available; two weeks before war was declared, it felt called upon to urge the council that such an army be raised. Perhaps the degree of public preparedness for what was later to take place is best illustrated by the reported remarks of the Chairman of the Senate Appropriations Committee who, on being told of the difficulty in estimating the cost of placing a fully equipped soldier in France, exclaimed, "My God! You don't intend to send men over there, do you?"

Even with the best of efforts the problem of planning and providing the equipment for such an army was extremely difficult and subject to constant change. The size of the different elements of which the army was to be composed was uncertain. How much of the army could be sent abroad was uncertain until it was possible to fix the amount of shipping available for both troops and supplies. It was uncertain what kind of equipment could best be adopted until it was known what materials would be available and whether experiments with a better type would prove successful. Obviously such interrelationships called for a high degree of cooperative planning and action. Yet at the start the tendency was for the various governmental bureaus to follow old methods and place orders independently, without seeking the advice of the Munitions Board. Manufacturers accepted orders for quantities of goods which under the conditions that developed they could not possibly turn out within the time wanted. They competed with one another in their efforts to get labor, raw materials, and supplies and their inquiries and options to cover bids on government orders abnormally increased prices.

By the summer or fall of 1917 it was evident that a serious congestion was developing in the manufacturing district of the North Atlantic states. Fuel and raw materials could not be brought in fast enough, adequate skilled labor was lacking, and consequently deliveries could not be made on time. Every government bureau wanted its order filled first and every manufacturer wanted his coal, raw material, and transportation requirements filled first on the plea that he was working on a government order. As a result there was no assurance that the things most needed at once

would be the first to be turned out. On top of all this there was the competition of government orders with those being placed in this country by the Allies, which resulted in numerous conflicts between the two, obviously injurious to the common purpose.

To meet this last problem there was set up in August, 1917, the Allied Purchasing Commission to which the war missions of the Allies submitted proposed orders and statements of future needs. The commission sought to coordinate the Allies' orders with those of the United States, to settle conflicts of interests, and to aid all in securing the best prices, terms of delivery, priorities, etc., that were practicable. Thereafter all purchases made by the Allies in this country with money borrowed from the government were approved by the commission, though it did not handle the details connected with the preparation, signing, and execution of the contracts. Some \$12 billion of such purchases were so handled during the war.

To meet the other difficulties indicated above, the council organized on July 28, 1917, the War Industries Board which replaced the General Munitions Board. Its duties were to

. . . act as a clearinghouse for the war industry needs of the Government, determine the most effective ways of meeting them, and the best means and methods of increasing production, including the creation or extension of industries demanded by the emergency, the sequence and relative urgency of the needs of the different Government services, and consider price factors and, in the first instance, the industrial and labor aspects of the problems involved and the general questions affecting the purchase of commodities.¹

This comprehensive field of activity made the War Industries Board of the greatest importance. Although it remained under the council until it was reorganized in the spring of 1918, its work will be separately described later. Separate treatment will also be given to other branches of work originally started under the council but later transferred to independent administrative bodies such as the food, fuel, railroad, and labor administrations.

Various other activities that continued under the Council of National Defense may be briefly noted as indicating the wide range of the problems with which it dealt. Important for its function in securing coordination of effort was the Section on Cooperation with States. Its object was to secure uniformity of action among the states wherever that was desirable and to see that there were developed in the several states such organizations as would best aid the work of the Federal government. As a result, state councils of defense were quickly organized in every state in the

¹ CLARKSON, G. B., "Industrial America in the World War," p. 37, Boston, 1924. The following account of the work of the War Industries Board is largely based on this volume and the quotations are cited by the permission of the publishers, Houghton Mifflin Co.

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spring of 1917, which were followed by local units commonly on a county basis. These local units proved particularly useful whenever it became desirable to place some need of the government before all the people, as in the case of food conservation or the sale of Liberty bonds. In all some 184,000 state and local units were organized to help carry on this work.

To coordinate and centralize the organized and unorganized forces of women throughout the country the Women's Committee was formed in April, 1917. Here also state and local units were established. The departments of work undertaken by the committee included food production and conservation, home economics, women in industry, registration for service, child welfare, social service; health and recreation, educational propaganda, and home and foreign relief. Recognizing the important part which scientific research and invention was destined to play in modern warfare, the President as early as April, 1916, had requested the National Academy of Sciences to secure the cooperation of all agencies governmental, educational, and industrial so as to coordinate them in the interest of national security and welfare. This led to the formation of the National Research Council which was later made a department of the Council of National Defense. Information was gathered from foreign countries concerning recent scientific developments related to war needs; in this country research was directed towards problems in physics, chemistry, engineering, medicine, psychology, and other fields where need arose. Through cooperation with the Chamber of Commerce of the United States, which organized committees representing different industries, the council was able to put various governmental organizations in touch with producers and distributors of a wide range of commodities.

A survey of the medical resources of the country had been started in 1916 by organized medical groups to aid the government, and in the spring of 1917 through cooperation with the council the General Medical Board was established to assist in the mobilization of the civilian and military medical resources. Another committee of the council was devoted to highway transportation to deal particularly with the congestion of transport facilities. The Committee on Engineering and Education sought to assist in the solution of problems in engineering policy and to enlist the resources of colleges and universities. Thus through one medium or another the wide-ranging activities of the Council of National Defense were extended to affect the work of a large portion of the nation.

The War Industries Board. Probably none of the governmental organizations set up to deal primarily with economic mobilization had a more direct and comprehensive contact with the industrial life of the country than the War Industries Board. Originally created by the Council of National Defense in July, 1917, with advisory powers only, it had to rely upon the support of the President, the secretaries of war

and of the navy, and other legally established agencies and upon the voluntary support of the businessmen of the country. In general the co-operation obtained from these groups was excellent. However, in the spring of 1918, when it was evident that the scope and effectiveness of the board's work would have to be increased to meet the growing war needs, the President reconstituted the board and made it an independent administrative agency directly responsible to himself and possessing enlarged powers. Its personnel and the general character of its work continued substantially unchanged under its new and efficient Chairman Mr. Bernard M. Baruch, in whose person most of the authority delegated to the board by the President was centralized. To quote the historian of the board,

The war was henceforth to be conducted, not only by the army and the navy, but by them with the War Industries Board, and in its field the last was to be supreme . . . [moreover] . . . through the War Industries Board the United States had in the end a system of concentration of commerce, industry, and all the powers of government that was without compare among all the other nations, friend or enemy, involved in the World War.¹

In reconstituting the board, the President declared that its function should be

. . . (1) the creation of new facilities and the disclosing, if necessary, the opening up of new or additional sources of supply; (2) the conversion of existing facilities, where necessary, to new uses; (3) the studious conservation of resources and facilities by scientific, commercial, and industrial economies; (4) advice to the several purchasing agencies of the Government with regard to the prices to be paid; (5) the determination, wherever necessary, of priorities of production and of delivery and of the proportions of any given article to be made immediately accessible to the several purchasing agencies when the supply of that article is insufficient, either temporarily or permanently; (6) the making of purchases for the Allies.²

This authorization involved a continuation in the main of the same general lines of activity that had previously constituted the chief work of the board.

In this work, as it was eventually organized, the commodities sections provided what the chairman called the backbone of the structure. These sections for the most part grew out of the subdivisions of the committees on supplies and raw materials and were organized from time to time as shortages or threatened shortages appeared in different lines. By the close of the war fifty-seven such sections were in operation. At the head of each was a chief with assistants all of whom were experts in the particu-

¹ *Ibid.*, pp. 48 and 63.

² *Ibid.*, p. 49.

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lar trade and each section served as a clearinghouse for information in its line, gathering together the body of facts necessary in dealing with its problem. Each governmental purchasing agency using the commodity was represented in the section. Contact with the producers was maintained through the War Service Committee organized for each industry and serving as spokesman and agent for the industry in its dealings with the board so that the latter could deal with the industry as a unit. It was through the commodity sections that the so-called "functional" divisions of the War Industries Board—conservation, priorities, price fixing, requirements, labor, and Allied purchasing—obtained their expert information, made contact with the industries and the purchasing agencies alike, received suggestions, requests, and complaints, and directed the enforcement of regulations and control.

Of the various functional divisions of the board that dealing with priorities was particularly important because of the great power that this gave the board to exert pressure on individuals in straightening out many of the problems arising out of the war. The priority system was destined to become one of the most effective and comprehensive means for securing coordination in, and control over, the industrial life of the nation. Its work developed out of a subcommittee of the General Munitions Board formed in May, 1917, when manufacturers and contractors with orders for more work than they could turn out at once asked which should be filled first. Obviously it was vital that some central authority with a broad view of the whole economic and military strategy of the war should settle such questions, otherwise costly delays and much confusion would result. At the start the committee could only give advice with no binding effect; the real work of control by priorities did not begin until the autumn of 1917 following the formation of the War Industries Board. Even then the full possibilities of the system were not appreciated, or believed authorized, until the reorganization of the board in 1918.

The Priorities Board as then made up had representatives of such governmental buying agencies as the army, the navy, the Shipping Board and the Allied Purchasing Commission so that the relative importance and urgency of the requirements of each could be fairly considered. It also had representatives of the War Trade Board, the Food Administration, the Railroad Administration, and the War Labor Policies Board which, through the cooperative use of their powers to supply to, or withhold from, producers the goods and services they controlled, were in a strategic position to compel compliance with the board's orders. In case further pressure was needed there still remained the power vested in various governmental officials under a series of laws to commandeer plants and goods, supplemented by the President's decree that no commandeering order was to be issued by a governmental department without

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the approval of the chairman of the War Industries Board. Facing such possibilities in the use of governmental powers, private business was made very amenable to the wishes and orders of the board.

The priority system was not only important, because it ensured that orders were filled in the sequence best fitted to meet the war needs broadly conceived, but it was also important in stabilizing prices, because the inducement to offer higher prices for quick delivery was removed, and as a corollary to price fixing, because otherwise chance and personal favoritism would have determined the flow of goods.

The Requirements Division was not organized until June, 1918, when, facing the necessity for an enlarged control of industry, the need for a systematic statement of requirements projected far enough into the future to allow time to provide the materials and facilities necessary for their production was keenly felt. Previously most immediate requirements had been handled by a clearance committee which studied prospective orders to see whether their execution would interfere with other needs; if not, they were cleared; otherwise they were reformulated. In cooperation with the commodities sections it was thus possible to keep track of outstanding orders and distribute new orders equitably among the trade and so as to avoid congestion.

To meet the need for planning ahead the new division secured from the government departments and the Allied Purchasing Commission statements of their prospective needs as far in advance as was practicable in view of the constant shifts in the war situation. These were discussed in the division from the point of view of their general relation to other requirements and then handed on to the appropriate commodity sections where detailed studies were made as to the possibilities and means for meeting the requirements. The findings were reported back and clearance was then authorized either without restrictions or with restrictions as to the power system to be drawn upon, the plants to be used, etc., as seemed desirable. At the same time the commodities sections thus secured information needed in their studies of curtailment or conservation and increased production programs as well as that useful in connection with priorities and price-fixing problems. As a result, for the first time during the war, a really effective coordinating and planning organization was secured. It is unfortunate, however, that two-thirds of the period of our participation in the war had elapsed before this result was achieved.

After determining requirements the next problem was to inventory the resources available for meeting these requirements either immediately or in the longer run through shifts in their use. The Resources and Conversion Section organized in May, 1918, took over the work of the Industrial Inventory Section which had been formed a year earlier. The country was divided into twenty-one industrial regions with an advisor and

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committee with representatives of the chief war industries in the area for each region. Through this medium there was gathered and sent to Washington information as to existing production resources, the extent to which they were being used, the possibilities of their conversion to war needs, and the possibilities for shifting unfilled orders to plants or localities where there was no congestion. For example, carpet plants were diverted to make blankets and duck, horseshoe plants made trench picks, toy plants made packing boxes, stove plants made hand grenades and trench bombs, fishing-rod factories turned out signal staffs. Another phase of the section's work dealt with the problems arising out of the enormous volume of wartime construction and sought to advise as to location, availability of transportation, power, fuel, labor, building materials, etc. as well as concerning competent architects or contractors.

The vast amount of statistical work and the endless multiplication of questionnaires sent out by various groups of which manufacturers and others complained needed to be coordinated. To do this the Council of National Defense had early created a statistical division which proved so essential that it was transferred to the General Staff of the army in April, 1918. To fill the gap in the work of the War Industries Board thus created, a Division of Planning and Statistics was at once formed with six subordinate sections dealing with prices, war contracts, questionnaires, commodities, etc.

The Conservation Division of the War Industries Board created in May, 1918, was a reorganization of the Commercial Economy Board of the council formed more than a year previous whose activities, however, had been chiefly limited to the field of distribution, whereas those of the new division were far broader in scope. Wherever there developed a shortage of materials, facilities, or labor, studies were made to see what measures of conservation were practicable and then, ordinarily through agreement with an industry, regulations were drawn up to put them into effect. These measures involved such things as reduction in the number of styles, varieties, sizes, color, etc., of various products; the substitution of articles and materials that were plentiful for those that were scarce; the standardization of products along lines that would further conservation; and the reduction of waste of materials in both manufacturing and distributing.

As illustrating the results obtained, or estimated as obtainable, a reduction of 12 to 15 per cent in yardage was secured in the case of men's and youths' clothing and of 20 to 25 per cent in women's garments. On certain knitted articles 33 per cent of the wool ordinarily used was saved. By better packing it was figured there would be an annual saving of over 17,000 carloads of freight space, 141,000,000 cartons, and nearly 500,000 wooden packing cases. Most shoe manufacturers cut their number of

styles about two-thirds. The number of sizes and types of steel plows was reduced from 312 to 76, of planters and drills from 784 to 29, of disk harrows from 589 to 38, and similarly in other agricultural implement products. In the hardware trade, one wholesaler figured that over 90,000 items would have been removed from his catalogue if the schedule as planned had had time to go into effect; but here, as with many other schedules, the war ended before this could take place.

The rapid rise in the general price level and the much greater rise in the price of war commodities, which had started in the autumn of 1915 and received a further impetus when the United States entered the war, created numerous serious problems. There was not only the greatly enhanced cost of the war to the government but the rising cost of living for the people, the serious disturbance of normal business operations because of the uncertainties due to rapid price changes, and the possibilities of war profiteering with its undesirable reaction upon public morale. Although the priority system and conservation measures had a stabilizing influence, it was clear that nothing short of the radical measure of price fixing would begin to meet the difficulty, and in July, 1917, the President announced that, if necessary, prices would be fixed on government purchases. Various laws gave the government the power to requisition supplies and to determine "just compensation" or "reasonable prices" to be paid therefor. This was further backed by the power to commandeer supplies and take over plants in case of refusal to comply on the part of the owner. How far the government's grant of powers extended to control the prices of commodities bought by the Allies or private individuals was in doubt, but in practice it was generally accepted. In fact practically all schedules of fixed prices were reached by a process of negotiation and agreement between the government and the industry involved.

Actual price control, starting in August, 1917, was taken up, commodity by commodity, as expediency dictated. Except for the commodities falling under the jurisdiction of the Food and Fuel Administrations the work was undertaken by the War Industries Board, and after March, 1918, by its Price-Fixing Committee appointed by the President who ratified and promulgated practically all the schedules. From the first, the Food and Fuel Administration's chief aim in price control was to protect the civilian population, and the usual method was to fix margins of profit rather than the basic prices of raw materials, coal being the chief exception. The War Industries Board at the start was concerned chiefly with fixing prices on government purchases, but it soon extended its activities to include protection of civilians as well. It found the most satisfactory method of control was by fixing the prices of basic materials. Prices were determined on the basis of estimated cost plus a reasonable profit and generally were fixed for three-month periods, owing to rapid shifts in

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costs. Since the costs of the same product varied greatly among different concerns and the price set was a flat price—the same for all—it was fixed at a point high enough to cover the costs of all but a few of the highest cost producers, as it was essential not to discourage production and it was assumed that taxation would take its toll from the higher profits thus accruing to low-cost producers.

If the price-fixing methods and policy of this war are compared with those of the Revolution, a great improvement is evident. Much of the earlier effort to control prices was designed to check the depreciation of the dollar and proved utterly vain. In the World War it was clearly recognized that such an attempt would be futile and would, if anything, only tend to decrease the output of goods. Consequently control sought only to check unreasonable profits and to secure greater stability of prices. Here at least it was evident that something had been learned from the lessons of history. Perhaps the most difficult problem in the efforts at price control during the World War arose from the intricate and endlessly ramifying interrelationship of prices, which tended to necessitate a constant extension of the scope of price control to ensure the desired results, and obviously made the problem extremely complicated in character. This is one reason why it is essential that action be taken at the very start before a rise in prices begins to spread and gather momentum. Whether this lesson has yet been learned seems doubtful.

Concerning other activities of the War Industries Board little can be added here. Although it took some part in the effort to remedy the chaotic conditions that developed in the field of labor, most of that task fell to the Labor Administration and the other organizations with which the board closely cooperated. In order to make more effective the work of the board as it related to those commodities whose principal sources lay outside of the United States and to assist in coordinating the demands of all the Allies, a mission was sent to Europe in July, 1918. Nitrate had already been put under international control; tin was subsequently treated similarly; and only the ending of the war prevented the establishing of like control over jute, rubber, leather, wool, tungsten, manganese, and several other commodities.

The Food Administration. The war created an abnormal demand for American foodstuffs among the nations of western Europe, owing to the elimination of certain sources of supply from central and eastern Europe, to the scarcity of shipping, which led the Allies to seek supplies from the North American rather than from more distant countries, and to the destruction and waste attendant on war. The necessity for increasing production, preventing waste, and controlling the distribution of existing supplies was obvious and led to the Food Production Act and the Food and Fuel Control Act of August, 1917. The first act gave the Department

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of Agriculture powers designed to stimulate production and further the conservation of food products on the farm. Under the broad power granted the President by the second act the National Food Administration was created, headed by Mr. Herbert Hoover, with extensive control over the processes and facilities involved in the production, distribution, and consumption of essential foodstuffs. This act also declared it illegal to hoard, monopolize, restrict the supply, and willfully waste such necessities, or to charge excessive prices therefor. Though Mr. Hoover's general policy was to rely as much as possible on educational propaganda and voluntary cooperation, resort to a more stringent use of his powers became increasingly necessary.

To promote conservation in the consumption of food a vast campaign of education was launched designed to reach every home in the country and to inculcate the most efficient and economical methods in the use of food. Pledges to follow these suggestions were obtained from over 11 million homes and "Hooverizing," as this was called, was generally accepted as a patriotic duty. Hotels and restaurants were placed under fairly strict supervision. More complete control over the preparation and distribution of the scarcer food products was secured by a licensing system applied to manufacturers, stores, and distributors of a rapidly expanded list of foodstuffs. The granting of licenses was made dependent upon adherence to the regulations established by the Food Administration in its effort to conserve and direct the flow of foodstuffs and to set definite limits to the rate of profit allowed the handlers of these products.

In the case of two commodities, wheat and sugar, the situation that developed was such that additional action was deemed necessary. To stimulate the growing of wheat, the government guaranteed the farmer a minimum price, originally fixed at \$2.20 a bushel for the standard grade for the 1918 crop. It should be noted that this instance of governmental price control differed entirely from the others because its objective was to stimulate production rather than to keep prices down; hence a minimum rather than a maximum price was fixed. Moreover, this method was resorted to as the most practicable because there were hundreds of thousands of small producers to whom the appeal for increased output had to be made, and individual agreements such as could be negotiated with a few large-scale manufacturers were impossible. As a further measure there was organized the Food Administration Grain Corporation with a capital stock, eventually raised to \$150 million, subscribed for by the government. This corporation bought wheat and wheat flour, including all the requirements of the United States and the Allies, and stood ready to maintain the guaranteed price. Eventually other cereals were included in its purchases. Through its activities, prices were stabilized and an effective control over distribution was maintained.

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For the other commodity, the Sugar Equalization Board was organized which bought raw sugar at an agreed price from the producers and in turn supplied the refiners with their needs under an arrangement that fixed their margin of profit and stabilized the retail price. In the case of both wheat flour and sugar the scarcity was such that a system of definitely limiting the amounts sold by retailers to consumers was deemed necessary, but the country escaped the detailed rationing of food that was adopted in most European nations.

The Fuel Administration. The threatened shortage of vitally necessary coal was such that the Food and Fuel Act, under which the Fuel Administration was set up, gave the President even greater powers than were granted in the case of food and backed them with the authority to take over and operate the plant or business of anyone not conforming with government regulations. The shortage of coal, which threatened to become a more serious matter for the civilian population than any other shortage, was due to numerous conditions most of which were outside of the coal-mining industry proper. The obstacles that had to be overcome in the effort to relieve the shortage well illustrate the wide scope and complexity of many of the economic problems arising out of the war. It was not so much an inability to produce coal that caused the scarcity as a lack of transportation facilities to distribute it. This in turn was due to such things as congestion of war order production in certain sections, lack of storage or warehouse facilities, lack of terminal or port facilities, and lack of shipping. In other words, in order to procure relief from the "lightless nights" which the Fuel Administration at one time decreed, it was necessary to get more shipping, more terminal and harbor facilities, more railroad cars and trackage, and to redistribute production of war orders. Any one of these tasks under wartime conditions was no small problem in itself and, for the most part, outside the scope of the Fuel Administration's powers.

To stimulate production of coal, the Fuel Administration sought to induce the operators and miners to increase their output, to decrease waste, and to introduce the most efficient methods of mining. To prevent strikes a detailed agreement was drawn up designed to stabilize and standardize wages and conditions of work and providing for mediation in case of disputes not settled otherwise. The price of coal was fixed at all stages of its handling from the mine to the retailer; the differences among different localities were worked out through an elaborate organization of state, county, and local representatives of the Fuel Administration. In cooperation with the Railroad Administration a zone system of distributing the coal was put into effect in March, 1918, under which each consumer received coal from the nearest mine. The elimination of cross hauls thus obtained was estimated at 160 million car-miles. By pooling the coal

sent to different consignees at several ports so that any coal could at once be used to supply any ship, thus eliminating delays in unloading cars and coaling ships, a saving was secured in the use of coal cars, terminal facilities, and shipping. In cooperation with the War Industries Board a priority system controlling the distribution of coal was worked out.

Voluntary agreements with various industries to reduce their use of coal were estimated to save 15 million tons a year. Beginning in November, 1917, the use of coal to generate electricity for operating illuminated signs, etc. during the evening was prohibited. In January, the burning of coal on Mondays in factories, stores, offices, and amusement places, with certain essential exceptions, was prohibited in the region east of the Mississippi, for about two months. Starting in April a general rationing for domestic users of coal was inaugurated under a licensing system operating largely through the state and local units of the administration. Meanwhile in January, 1918, control over the distribution of fuel oil had been inaugurated through a similar method. Shortly before the war ended this was extended to include natural gas, gasoline, and related products.

The Railroad Administration. The history of wartime control over the railroads shows much the same sequence of experimental steps, each, as necessity dictated, leading to the more comprehensive and centralized control that marked development in other fields. Beginning with a committee of the Council of National Defense organized to plan for the most effective utilization of the railroads for war purposes, the next step was to form four committees representing the railroads concerned to cooperate with the commanders of the four military departments. Since this proved totally inadequate in scope and power, the chief railroads in April, 1917, voluntarily set up the Railroads' War Board which they agreed was to have authority to formulate a detailed policy of operation to be accepted by all. To strengthen control the Preferential Shipments Act of August, 1917, empowered the Interstate Commerce Commission to assume complete control of the use of cars by the railroads during the war and thus provide for a priority system in car service. Though the Railroads' War Board accomplished much in conserving and mobilizing railroad facilities, its best efforts and powers were insufficient to meet the various needs in the situation that developed. As completely centralized and absolute control was finally recognized to be essential, the President by proclamation, under authority of an act of 1916, took over control of the whole railroad and water transportation system beginning Jan. 1, 1918, and placed it under the Railroad Administration. This move was actuated not only by the need for greater unity of action but also because nothing short of governmental powers seemed adequate to cope with the financial and labor problems that then overhung the railroads. Later the chief express

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companies were consolidated into one concern which was subsequently placed under the Railroad Administration.

In March, 1918, to make effective the terms of the President's proclamation, Congress passed a law assuring to the railroads, during the period of government operation, an income equal in each case to the average for the three years ending June 30, 1917. There was also created a revolving fund, originally \$500 million, to which any money available from operating income of the railroads was to be added, to be used to pay the expenses of Federal control and such compensation as became due the railroads, and also to provide additional equipment, to extend loans to the roads, or to develop water transportation. In addition the law gave the President power to initiate changes in rates, classifications, and practices, subject to the Interstate Commerce Commission.

To settle the labor difficulties that threatened when the government took over the railroads, a commission was appointed to report on the readjustment of wages of railway employees. The resulting report of May, 1918, recommended varying rates of increase, estimated as totaling about \$350 million a year, to offset the rising cost of living. This added burden of costs imposed upon the railroads, already in a difficult situation financially because operating costs were rising rapidly while rates remained fixed, soon necessitated an advance in rates. Meanwhile, in order to deal with any labor disputes that might arise and prevent possible strikes, the government created several boards to deal with labor questions and succeeded in getting through the war period without any serious interruption of traffic due to this cause.

By operating the railroad system as a unit, innumerable forms of economy were possible which not only decreased costs but also resulted in a more efficient use of the existing facilities. Ticket offices in the large cities were consolidated; common use of terminals, cars, and other facilities was increased; unnecessary trains were eliminated; advertising expenses were cut; congestion of traffic at critical points was reduced; and freight generally routed the shortest way. The ultimate cost to the government under its guarantee to the railroads, however, was heavy, and amounted, by the time the roads were turned back to private operation in February, 1920, to about \$1.2 billion.

In passing, it may be noted that the government also found it expedient to assume control of various communication facilities. In July, 1918, the President was given power to take such action and the telegraph and telephone systems were at once taken over and placed under the administration of the Postmaster General. In November, marine cables controlled by American companies were taken over. The radio systems had been taken over at the outbreak of the war and placed under control of the Navy Department.

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The War Trade Board. There were three main reasons for establishing a centralized control over foreign trade: (1) The country was dependent for certain essential products on imports from other countries and it was desirable to make sure of means for securing them. (2) It was obviously desirable to prevent any supplies from the country passing into the hands of the enemy. (3) Since shipping was so extremely scarce, its use had to be conserved by limiting water-borne foreign trade to the commodities deemed most essential. To provide for such control, authorized by the Espionage Act of June, 1917, and the Trading with the Enemy Act of October, 1917, the President in the latter month created the War Trade Board to succeed to the work of certain temporary boards previously organized. This was supplemented by the creation of the Alien Property Custodian, to control the private property of enemy aliens in this country, and of the Censorship Board.

After trying to determine, often with the aid of other governmental organizations or the advisory War Trade Council, just what needed to be done, the War Trade Board carried out its control by a licensing system. In lines of trade where effective organizations existed these were often used as the means for carrying out the regulations. The right to refuse bunkering coal and other necessary supplies to ships provided the Board with a particularly effective leverage over the use of shipping facilities. There was a decided advantage also in giving the government control over exported commodities needed by other countries since it enabled the government to bring pressure to bear on those countries, and even on the Allies, to allow this country to secure certain commodities which they controlled. Our government could also assure them, if desired, that the use to which the commodities was put would in no way redound to the benefit of the enemy. In checking any trade that might directly or indirectly be advantageous to the enemy the powers of the Board proved to be most wide-reaching. Individuals and concerns throughout the world whose activities were considered undesirable could often be placed under a form of such direct or indirect boycott that these activities were abandoned.

The Shipping Board. The paramount importance of taking steps to counteract the growing scarcity of shipping has already been pointed out and in an earlier chapter the results of the efforts made in this direction were briefly summarized. At this point therefore attention will be centered on the methods and means through which those results were achieved.

The Shipping Board under the act of 1916, in addition to its regulatory powers, was given the duty of securing shipping and making provision for its operation. For this purpose it organized in April, 1917, the United States Shipping Board Emergency Fleet Corporation, with a capital of \$50 million, subscribed by the government, to which it delegated its

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powers for the acquisition and operation of shipping. Through subsequent legislation the powers of the board were further expanded until it was in a position to exercise almost complete control over the construction and operation of our shipping other than that under control of the navy or the army.

Urgent as was the need for shipping, the country faced the stubborn fact that ships could not be built overnight; months and generally a year or so were ordinarily required. One source of supply was almost immediately available in the 600,000 tons of German shipping interned in American ports. In May, 1917, the President was authorized to take these over for the United States, and did so immediately. Despite the fact that the German crews, anticipating such action, had so damaged the machinery that repair in any reasonable time was deemed impossible, American ingenuity was able to alter and recondition the ships so that within six months all were in use. Among them was a group of large passenger ships which ultimately transported over 550,000 troops overseas. Subsequently negotiations with several foreign countries resulted in securing still other enemy ships interned or seized in foreign ports. Additional shipping was chartered or bought through agreements made with neutral or allied countries. In March, 1918, over 500,000 tons of Dutch shipping in American ports was taken over under terms providing compensation to the owners.

Still another source of supply was the shipping in course of construction in this country. Shipbuilding, of course, had been greatly stimulated since the outbreak of the war, no small amount being for foreign account. When the government in August, 1917, commandeered all the steel cargo-carrying vessels in process of construction suited to its needs, it obtained 431 vessels totalling over 3 million dead-weight tons. After desirable changes in their construction were planned, work on these was rushed and over half the tonnage had been completed by Oct. 1, 1918. It was in fact from such sources as these, rather than from construction started by the government, that most of the additions to the available shipping were obtained before the war ended.

Such additions, however, fell far short of the needs, for the world demand for shipping was growing while the world supply was steadily declining; and new construction was inadequate to offset losses due to the submarines. Hence the government started a program of shipbuilding on a scale unprecedented in history. As the shipyards of the country were already working up to capacity, it was first necessary to start at the beginning and build new yards or expand the old ones. To meet this need the number of shipways suited for steel vessels was about tripled; that suited for wooden vessels was quintupled before the end of the war. The result was that the United States then had about double the total of the

rest of the world. The largest yard, that at Hog Island near Philadelphia, had a capacity greater than the total of Great Britain in any prewar year. The capacity of all the yards was estimated at 6 million dead-weight tons a year. In some cases, such as Hog Island, which was originally little more than a swamp, this also meant providing the homes and living facilities for a fair-sized city, for at Hog Island at the peak 34,000 people were employed.

The shipbuilding program involved a decision as to the kind of ships to be built, which had to take into consideration the need for speed, the construction facilities, and the available supply of labor and raw materials. Steel vessels were preferred, but it was also decided to build wooden and concrete vessels since a greater supply could thus be obtained and wooden ships could be built more speedily. Standardization of plans for the different types was stressed; in the case of steel ships much use was made of the process of fabrication whereby the different parts were turned out at various plants and simply assembled at the shipyards. Cooperation with the War Industries Board and the Railroad Administration helped to ensure the prompt and orderly delivery of the required materials.

The task of securing and steadily maintaining at work an adequate supply of labor became an acute problem. In the course of nine months, through setting up an elaborate recruiting system, the number of shipyard workers was raised from 50,000 to 350,000. The different governmental organizations and private employers were all competing with one another for workers so that the latter were constantly moving from place to place, with delays and inefficiency resulting; disputes and threats of strikes were numerous. Hence it was necessary to set up an organization to further standardization of wage rates and policies and to settle disputes.

Actual construction was carried on not only in the four great "agency yards" created for the purpose by the Fleet Corporation but also in nearly 200 other yards in different parts of the country. At its height in October, 1918, the program of construction provided for a total output of 17,400,000 dead-weight tons of shipping, but following the armistice this was reduced to 13,000,000 tons. Up to Nov. 1, 1918, a total of 480 ships of 2,756,131 dead-weight tons had actually been delivered; two-thirds of this tonnage represented requisitioned shipping, and the remainder was construction initiated by the corporation. The peak in the monthly delivery of ships was not reached until September, 1919; during that year nearly half of the corporation's total delivery of ships took place. The completion of the program required a year or two longer.

In addition to the task of shipbuilding the Emergency Fleet Corporation had the problem of controlling the operation of most shipping. There, as in the case of other scarce goods or services, centralized control was

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necessary not only to conserve, mobilize, and direct the distribution of shipping but also to regulate shipping rates. By the summer of 1917 charter rates on cargo steamers for use in trades outside the war zone were about fourteen times the rates in the spring of 1914. Even allowing for greatly increased costs of operation and war risks it was obvious that most rates were extortionate. Under such circumstances, as the Chairman of the Shipping Board later wrote, "There was nothing to do but to own or control every ship that flew the American flag and to fix the scale of requisition rates ourselves at some fair level that represented legitimate values." This was accomplished through an order of October, 1917, which requisitioned for the Fleet Corporation all American steel cargo and passenger vessels of 2,500 dead-weight tons or over suitable for ocean service. The general policy was to retain the owners of these ships as operators for the Fleet Corporation, which could thus control the use to which the ships were put and the rates charged. The reduction in rates was often from one-third to one-half and sometimes as much as three-quarters of those previously prevailing.

Even with this action the centralization of control over shipping proved insufficient. The congestion at ports in both this country and France and the fact that the War Department, the Navy Department, and the Shipping Board were each operating separate fleets developed a situation that was chaotic. To overcome this difficulty a Shipping Control Committee was formed to supervise and coordinate the operation of the combined fleets. By thus pooling the whole group, great economy was secured. Delay in French ports, due in part to congestion on the French railroads, was lessened by securing ships that could carry across American locomotives already fully assembled and so avoid months of delay in reassembling them on the other side. Additions to docks, dry docks, warehouses, and other port facilities were also constructed. Through such means the time required for the round trip to France, including loading and unloading, was cut in half and was equivalent to a saving of hundreds of ships. Yet even then the available supply fell short of the needs and it was necessary to borrow from England to help transport the troops sent oversea in 1918. This was facilitated through the organization of the Allied Maritime Transport Council early in 1918, which was designed to study the shipping needs and resources of all the allied and associated countries and to prepare plans for the most effective use of these resources. It was a purely advisory body, each country retaining control over its own ships, but it did promote more effective international cooperation. It represented the peak of attainment in centralized planning for the use of shipping.

The Bureau of War Risk Insurance. Intimately connected with the shipping problem was that of providing marine insurance against war

risks, for without such provision private enterprise was hardly prepared to send ships and cargo near the war zone. The uncertainties of the situation were so great it was evident that private insurance companies would either decline to underwrite war risks or else feel compelled to charge almost prohibitive rates. Therefore Congress in September, 1914, authorized the government to insure against war risks American ships and their cargoes and later extended this to cover certain groups of foreign ships and their cargoes and to provide a limited life and personal injury insurance for the officers and crews of American merchantmen. The premiums charged were fixed at rates estimated to cover costs to the government.

After the United States entered the war, the bureau was made the agency through which the government provided insurance and compensation for the soldiers and sailors. This action marked a new departure in wartime policy on the part of the government. The law had three distinct objectives in view: (1) It provided for compulsory and voluntary allotments to be deducted from the pay of enlisted men and given directly to their dependents. (2) These allotments were augmented by allowances of varying amounts contributed by the government. Through these means provision was made for the dependents of men in service during their term of service. (3) Compensation for death or disability incurred in the service was established. The cost of this was met by the government; in addition, men in the service were given the opportunity to secure from the government insurance against death or permanent total disability in amounts between \$1,000 and \$10,000 and at rates much lower than would otherwise have been obtainable. It was hoped that in this way the pension legislation that had characterized the aftermath of previous wars could be avoided.

The Labor Administration. When, on top of the greatly increased demand for labor created by the war, nearly 4 million active men were withdrawn from the available supply to serve in the army or the navy and the usual supply of immigrant workers was cut off, the necessity for conserving and mobilizing such labor resources as were still available was obvious. In addition the rapid rise in the cost of living, not to mention such developments as wartime profiteering, had caused much discontent among the workers and many strikes with the resulting loss in labor time and the delay in production.

There had also developed an unusually rapid turnover of labor. Workers seeking to better their condition and stimulated by the competition among employers to obtain labor were constantly moving about from one job to another, with further waste and inefficiency as the result. To prevent this some degree of standardization of wages and working conditions for similar work was necessary. Since laborers were being enticed to migrate from one section of the country to another, this

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standardization, after allowing for different conditions in different sections, needed to be nationwide in scope. Without highly centralized control and coordinated administration this was impossible of attainment, yet it required a year of chaotic experience in dealing with the problem before the government was prepared to adopt the measures necessary to this end.

To increase and further a better distribution of the supply of labor a variety of measures was adopted by the different branches of the government. Through cooperation with the War Department care was taken to exempt from the selective draft for the army skilled workers in any trade essential for war purposes where there was a serious deficiency in the supply. Over 100,000 laborers were brought into the country from Puerto Rico and the Virgin Islands. It was found that women and children could be employed in a wide range of tasks previously generally carried on by men. Where necessary some training was provided and usually regulations designed to protect the health and well-being of these workers were insisted upon. It is estimated that after 1915 nearly 1 million women were added to those engaged in gainful occupations outside the home. Through the Boys Working Reserve some 300,000 boys from sixteen to twenty-one years of age were eventually enrolled and placed at work, for the most part on farms. A particular effort was made to provide a brief intensive period of training for men in certain of the skilled trades where the need was most urgent.

The most effective work looking towards a better distribution of the labor supply was carried on by the Employment Service of the Department of Labor. This had been operating upon a moderate scale for several years but its activities were greatly expanded after 1916. Measures were soon taken to secure an effective coordination of its work with the various state and local employment agencies so as to cover the whole country, and its recruiting activities were supplemented by the aid of these and many other agencies. Through the medium of state and community labor boards a country-wide system of clearances was set up and, in important agricultural and industrial regions, special divisions were created to care for shipyard, dock, railroad, farm, and woman labor. During the year 1918 over 10,000 workers a day were being placed. In June, 1918, the President issued a proclamation requesting all employers engaged in war work to secure all their unskilled labor through the Employment Service and urging labor to seek work in the essential war industries. Through such means it was possible to reduce the labor turnover, to establish some degree of priorities in the distribution of labor, and to direct the flow of the supply to the most important lines of work.

The problem of preventing labor disputes and strikes was made more acute by the appearance of the conditions that tend to develop discontent among workers, as already noted. Except for an extremely small left-

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wing group the general attitude of organized labor toward the government during the war was patriotic and cooperative. Such was the position of the American Federation of Labor under the leadership of Samuel Gompers. Upon our entrance into the war, in order to reduce to a minimum any interference with war work that might arise from disputes between workers and employers, Mr. Gompers, as Chairman of the Committee on Labor of the Council of National Defense, called a conference of representatives of both groups which led to an understanding that virtually established a truce between the contending groups for the duration of the war. Each group was to endeavor not to take advantage of the country's necessities to change existing standards and to refrain from acts of aggression that might lead to a cessation of work. Though simply an expression of policy without the backing of authority, this understanding was carried out by most of the leaders on each side. But this was far from proving sufficient to settle disputes or to prevent strikes and much more elaborate means had to be devised to further such ends.

Before we entered the war there were already in existence two Federal bodies designed to provide for conciliation and mediation in labor disputes. The activities of one of these boards was confined to disputes between railroads engaged in interstate commerce and their employees and so very limited in scope. The other, organized in the Department of Labor as the Division of Conciliation, not being so limited, was in a better position to expand its activities. As events developed at first the tendency was to form separate bodies to deal with labor disputes in different lines of work. To mediate a group of serious disputes that had arisen in the Pacific Northwest, a special commission was appointed by the President. The Council of National Defense set up a National Committee on Mediation and Conciliation of seventy-five members to further a peaceful settlement of labor disputes and to cooperate with other similar bodies, Federal or state, wherever deemed desirable. A more forceful move was the creation by the council in August, 1917, of the Labor Adjustment Commission with subsidiary committees to adjust disputes over wages or conditions of employment in establishments having government contracts in accordance with the eight-hour law. The War Industries Board created a Committee on Labor to deal with the problems arising under its jurisdiction. The War Department formed several bodies to deal with troubles in cantonment construction, army cloth, harness, and saddlery manufacture, and other fields in which it was interested. Similarly the Shipping Board, the railroad and the fuel administrations, and others found it expedient to set up organizations to deal with labor disputes arising in their fields of action.

Although these various bodies did valiant work in securing a settlement of the labor disputes that came before them, it was impossible for

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them individually to cope effectively with the underlying causes chiefly responsible for the endless series of controversies. About one cause, the rapid rise in the cost of living, the labor administrators could do little; but in so far as disputes and the heavy turnover of labor were due to lack of standardization of working conditions, more effective coordination could accomplish much. Lack of centralized control also often led to working at cross purposes, as was illustrated in the case of a strike in a munitions plant when representatives from four different governmental agencies each with different instructions appeared upon the scene to settle the dispute. Such conditions caused the President's Mediation Commission in its report of January, 1918, to say:

Unified direction of the labor administration of the United States for the period of the war should be established. At present there is an unrelated number of separate committees, boards, agencies, and departments having fragmentary and conflicting jurisdiction over the labor problems raised by the war. A single-headed administration is needed with full power to determine and establish the necessary administrative structure.

With the same objective in view the Council of National Defense drew up for the President a specific program for action, which he in substance proceeded to put into effect.

The first step was to appoint the Secretary of Labor as Labor Administrator, who in turn chose an Advisory Council to study all phases of the labor problem, make plans for additional machinery, and supervise their execution. To obtain the approval and support of employers and employees, the War Labor Conference Board was created with representatives from these two groups and the public to assist in the formulation of the labor program. The report of this board recommended certain principles and standards for a governmental policy in dealing with labor during the war. It also advised the creation of a National War Labor Board to mediate and, if necessary to arbitrate, on the basis of the principles enunciated, in any labor dispute which directly or indirectly threatened to delay work essential to the conduct of the war. In April, 1918, the President created such a board with the same membership as that of the Conference Board and for the remainder of the war it was active in settling many disputes. In only a few cases were its awards not accepted by the parties involved.

To supplement the essentially administrative work of this board there was created in the following months the War Labor Policies Board made up of the men chiefly responsible for the labor policy in all the branches of the government service that had to deal with large groups of laborers. Its main purpose was to further the standardization of working conditions in line with the general principles of policy adopted by the

War Labor Board, where necessary working these out in detail, and to allocate the supply of labor in accordance with the most essential needs.

Of the various other activities of the Labor Administration only a brief mention can be made. In the main they were concerned with improving the working and living conditions among the laborers. In certain places where a great congestion of war work was allowed to develop housing facilities proved utterly inadequate for the needs of the workers. Faced with the great uncertainty as to how long the need would last, private capital was generally unwilling to provide the necessary housing and so the government was obliged to finance an extensive program of construction. In addition to \$75 million granted the Shipping Board for this purpose \$100 million was appropriated to be used by the Secretary of Labor. In July, 1918, the United States Housing Corporation was formed to have charge of the actual construction and operation of the worker houses. Though most projects were unfinished when the war ended, developments were then under way estimated to provide for 9,000 families. In some cases the need was met by developing transportation facilities between factory sites and near-by housing accommodations. To promote a sound public sentiment on labor questions and to place the real issues of the war before the workers was the object of another branch of activities. Still another investigated living conditions of the workers and sought to discover and eliminate causes of discontent. An extensive service was organized for the training and dilution of labor and a special study was made of the Negro wage earner's position and the means for improving it.

Other Governmental Organizations and the Allied Councils. The most important agencies of the government dealing with the economic aspects of wartime problems have now been described except for those arising in connection with finance, which will be taken up shortly. Our account, however, falls far short of providing an adequate picture of the elaborateness and the comprehensive scope of the organization that was eventually developed to meet the needs that arose. Nothing has been said of the Committee on Public Information and its activities in spreading facts which the government wished presented to the people or in censoring news that might have injurious effects. The work of the Aircraft Board and others in the development and production of aircraft, though there was serious delay in achieving the desired results, should at least be noted. As for the rest it must suffice to note that the "Handbook of Economic Agencies of the War of 1917," subsequently published by the government,¹ lists many hundreds of boards, committees, councils, etc. each of which played some part in the great undertaking.

¹ Prepared in the Historical Branch, War Plans Division, General Staff, Washington, 1919.

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As the preceding account has indicated, the development of governmental organizations during the war was being worked out from day to day as the exigencies of the situation seemed to demand. Yet throughout the war in practically every field the outstanding tendencies were those toward a broadening of the scope of activities and an increasing centralization of control. That this was essential, if the nation wished to make the most effective use of all its resources, might have been realized at the start on the basis of the experience of other nations and the lessons of history. But the effects of the long tradition of individualistic private business control were not easily overcome and the United States, like most of the other nations, was slow to accept the wartime need for change. Typically it was the repeated experience of delay, waste, working at cross purposes, and chaotic conditions generally, that forced the adoption of a policy of more general coordination of effort and greater concentration of control.

What may be considered as the peak of attainment in this line of development was the move that led to the formation of the various inter-Allied councils. Immediately these were the outgrowth of the inter-Allied conference held at Paris near the close of 1917. Just as experience showed the need for placing the supreme command over military operations on the western front in the hands of one man, so in economic affairs it became evident that only by coordinated planning and greater concentration of control on the part of all the Allied and Associated countries could the best use be made of their economic resources. The Inter-Ally Council on War Purchases and Finance was organized in December, 1917, to coordinate purchases made by the Allies, to serve as a clearinghouse for information as to Allied needs for funds, and to develop a unified policy relating to loans made to different countries by the United States or other nations. The Inter-Allied Food Council, also organized at this time, served to allocate stocks of food and to prepare programs for their transportation. These programs were then turned over to the Allied Maritime Transport Council, which began operations in March, 1918, with the purpose of supervising the general conduct of Allied transport to secure the most effective use of the available tonnage.

Still later, in the summer of 1918, the Inter-Allied Munitions Council started to function, with the purpose of making programs for finished products used by the armies and for the requisite raw materials. Minor organizations included those dealing with tin, nitrate, petroleum, wheat, and sanitation. Most of these inter-Allied economic organizations were absorbed or replaced for the last part of the armistice period by the Supreme Economic Council. In general these Allied bodies were chiefly valuable because of the coordinated planning of the use of economic resources. The extent to which they could exercise absolute control sometimes was rather limited.

CHAPTER XLIII

ECONOMIC ASPECTS OF THE WORLD WAR YEARS.— (*Continued*)

The Accomplishment. The account of the difficult problems that arose in speedily equipping the fighting forces with the required goods and services at the same time that the necessities of the civilian population were served, together with the elaborate organization developed to effect this, has required considerable space. The more significant results achieved can be stated rather briefly.

The total number of men serving in the various branches of the armed forces of the country during the war was 4,800,000, or nearly one out of every twenty in the population. In the North during the Civil War about half as many were in service but they made up one out of every ten in the population. The selective draft was eventually extended to include all men from eighteen to forty-five years of age. This universal draft, which provided 60 per cent of the armed forces, was generally accepted as a much more democratic, equitable, and far less expensive method of securing recruits than was employed in the North during the Civil War when bounties were offered and only about 2 per cent were drafted. Of the total armed forces in the first World War, nearly 4,000,000 were in the army and one-half of them went to France; however, nearly four-fifths of this latter group did not go oversea until after May, 1918, and only two-thirds served in battle. Since most of the supplies for the oversea army came from the United States, this meant waging war at a distance of 3,000 or 4,000 miles from the ultimate base of supplies, an undertaking hitherto unequalled in the scale of operations involved. There was thus, in addition to the task of producing the supplies, the unusually difficult task of transporting and distributing them. All things considered, it must be said that the achievements were truly remarkable, far greater than anyone appreciating the difficulties involved would at the start have deemed possible.

It was, indeed, in the task of producing shipping for oversea transportation that the accomplishment of the tremendous organization set up to provide for war needs fell furthest short of what was desired. The efforts made have been described and, though mistakes occurred, it is clear the main reason for not accomplishing all that was desired was the physical impossibility of the task imposed. Though the need for ships

mounted rapidly after the United States entered the war, the supply available to the Allies steadily declined, owing to submarine activities and other causes, until the summer of 1918; the increasing supply, thereafter available, was due primarily to the output of this country. The turn of the tide came just when the need was greatest. Even then, when the great movement of troops began in the spring of 1918, British shipping diverted for the emergency was the chief reliance and half of all the troops sent oversea were transported by this means. On the other hand over 95 per cent of the cargo shipments was carried in American vessels; the peak was attained in November, 1918, with 800,000 tons. The total cargo shipments of the army to the end of April, 1919, amounted to nearly 7,500,000 tons, quartermaster's supplies, chiefly food and clothing, making up nearly half the total. It was the difficult task of the navy to safeguard most of the American shipping engaged in the transport of troops and this little heralded work was accomplished with remarkable efficiency. Not a man was lost through enemy action in the eastbound American troopships and but a few on the westbound passage. The convoy of troops carried in British ships, most of whom were landed first in England, and that of most cargo vessels were under British control and were also carried on with but slight losses.

The amount of construction that had to be done in France to provide for the needs of the American forces is seldom realized. It was almost equal to that done in the United States, which represented an outlay of \$800 million. In the ports 83 new ship berths together with warehouses and dock equipment were built to lessen delay in unloading, and the cargo handling capacity was tripled. Nearly 1,000 miles of standard gauge and half as much narrow gauge track were constructed, and almost 27,000 freight cars and 1,800 locomotives had to be shipped over to use as rolling stock. For communication purposes 100,000 miles of telephone and telegraph wires were put up. In addition there was the construction necessary for training camps, hospitals, etc., for which local materials were generally available. Although the port and railroad facilities in France were never entirely adequate, the resulting delays do not appear to have been serious.

The supply of shipping was the chief limiting factor—the bottleneck that determined the rate of flow of troops and supplies to France. Obviously the oversea movement of troops and supplies had to be coordinated—troops were of no use in France without such American supplies as they were dependent upon. Besides the limitation set by the available capacity of troop and of cargo ships, there was a possible limitation in the country's ability to produce the required supplies. Thanks to the efforts and organization previously described it was found possible to meet most of the requirements of such troops as were sent oversea.

As far as food and clothing were concerned, the supplies available for the army in France were always adequate, except for the brief local shortages incident to army movements. What was involved in the effort to accomplish this can be inferred from the fact that it was deemed desirable to maintain in France a reserve food supply sufficient to last at least 45 days—it was fixed at 90 days before the submarine danger had been decreased. For clothing the estimates involved keeping a three months' reserve in France, another two or three months' supply in the United States, and a third three months' supply in transit. Much the same situation existed in the case of other supplies subject to rapid consumption. This illustrates the peculiar difficulty arising in the earlier part of a war in securing adequate supplies for a rapidly growing army, a difficulty which in this case was increased by the distance from the ultimate base of supplies and the unusual risks and delays involved in oversea transportation. As long as adequate supplies were not on hand when the war started, it was necessary in order to equip troops at the front, establish adequate reserves behind the line, and provide a steady flow sufficient to maintain these reserves, to have a productive capacity that was two or three times greater than that which was subsequently needed to meet the requirements of any given number of troops.

In providing the oversea army with the needed fighting equipment, the country was rather less successful than in the case of food and clothing. Though the Springfield was considered the best infantry rifle, it was found impossible to increase the supply fast enough to meet the needs. As there were several factories that had been working on British orders and were already equipped to turn out Enfield rifles, it was decided to use their facilities; a slightly modified Enfield, capable of using the same ammunition as the Springfield, was adopted. By this means the oversea army at least was adequately equipped with rifles. For machine guns it was necessary to rely very largely on French supplies until the latter part of the summer of 1918, by which time the very efficient American Brownings were available on the front. The supply of pistols and revolvers was always insufficient and the limited numbers available had to be distributed among those in most urgent need of them. Ammunition for the various small arms appears always to have been available in sufficient quantities.

Since the technical processes necessary to increase the output of artillery and its ammunition required much more time, it was decided, to meet the immediate needs, to secure supplies from France or England. These were forthcoming in sufficient quantity for the trained artillery troops available (though these were never adequate) and the war was over before the American output began to reach the front in any quantity. Much the same situation existed as regards heavy tractors and tanks. In

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the case of airplanes about one-fourth of those sent to the zone of advance operations for American aviators was of American manufacture. It should be added, however, that the enormous American output of smokeless powder and high explosive, not to mention various essential raw materials, was of great aid to the Allies during most of the war. Thus it can be said that, in the main through the output of our own plants but in some essential parts through the aid of the Allies, the American troops that reached the front were pretty adequately provided with the needed supplies and equipment.

The ultimate achievement was the winning of the war. How much the effort of the United States contributed to this outcome is a question that need not be discussed here. The main brunt of the task in holding a retreating line unbroken in the great German offensive of 1918 fell upon the Allies, though American troops participated. Meanwhile the United States was responding magnificently to the urgent cry to speed up the movement of troops and supplies. The results completely altered the balance of man power on the western front. On Apr. 1, the Germans had a superiority of 324,000 riflemen; during June this balance was turned in favor of the Allies; by Aug. 1, it had risen to 277,000 in their favor and to over 600,000 by Nov. 1, despite a decline in the number of British and French troops. Thus when the German attack had been halted on July 15, American troops were prepared to take a prominent part in the offensive which was immediately launched and speedily brought the war to an end.

The cost of the war in life and money was appalling. The total of battle deaths in the course of the war is estimated at 7,450,000 and may be contrasted with a total of less than 6,000,000 in all the chief wars from 1793 to 1914. The direct money cost to all the nations engaged is estimated at \$186 billion, whereas the total of indirect costs was almost as much again. The grand total of the cost thus exceeded the total wealth of the United States estimated in 1922 at \$320 billion. The number of American lives lost was 122,500, somewhat less than one-half being battle deaths; in the expeditionary force the battle deaths were twice those due to disease. The record of losses from disease showed a vast improvement over previous wars; typhoid, commonly the most serious camp disease, was practically eliminated. Hospital facilities for the oversea troops were always in excess of needs and the medical work generally maintained a high standard of efficiency. The immediate money cost to the United States, including the loans to foreign countries, was over \$30 billion.

The war was won; but what of the ultimate objectives for which the victors fought? The slogan of the United States on entering was that the world must be made safe for democracy. Victory prevented the realization of whatever aims the Central Powers may have had and there was

a widespread movement towards a more democratic type of government in Europe. Unfortunately the chaos and universal suffering following the war created problems which the new democracies found difficulty in meeting effectively, and the resulting discontent produced a movement towards fascism on the one hand or communism on the other, the results of which have yet to be determined. Meanwhile the efforts of each nation to save itself, aggravated by war hatreds, intensified the spirit of nationalism, made the problems dependent upon world cooperation more difficult than ever, and finally led to a new war. In 1910 there was published a book entitled "The Great Illusion" the main thesis of which was that under modern conditions of warfare no nation, not even the victor, was likely to gain anything thereby in the long run. As we look back over the world chaos and suffering which followed the first World War, we must be convinced that few prophecies have had a more dire fulfillment.

Thus far in this section we have considered the achievements of the government's efforts only as they were related to the problem of providing the goods and services necessary for carrying on war. The results of its efforts in providing for the needs of the civilian population can be stated briefly, though the account of the most important of the reactions on the civilians, since they arose out of the methods adopted for financing the war, will have to be postponed until after that topic has been dealt with.

It can fairly be said that, in general and leaving out of account the results of inflation, the civilian population was adequately provided throughout the war with all the necessities and a goodly share of the luxuries that they had been accustomed to enjoy. The restrictions on the consumption of food were for the most part voluntary and slight where compulsory. The limitations on the use of coal for domestic purposes were barely felt and those applying to other uses were brief. The limitations on the use of electric power for advertising might be deemed socially advantageous at any time. Numerous forms of personal services had to be curtailed, but none that could be considered essential were appreciably reduced. There were doubtless many cases where the families of those entering one or another branch of government service suffered from reduced income, but both private and governmental assistance was more widely extended to really needy cases than ever before. There were not a few, among the wage earners as well as the speculators and producers of war supplies profiting from the situation, whose extravagant expenditures attracted much attention. As a whole the nation worked harder and for longer hours than customarily and the pursuits of leisure, cultural or otherwise, suffered accordingly. Except for those, to be described later, whose incomes failed to keep pace with the rising cost of living, the chief effects of the government's wartime effort upon the families of the civilian

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population consisted in harder and longer work and the loss of a few less essential goods and services.

The Problem of Financing the War. The remaining one among the three outstanding economic problems of war deals with the question of how the war was financed. The treatment of this question can best be divided into two parts one of which will deal with the fiscal needs and the measures adopted to meet these needs by borrowing or taxation. The second part will deal with the effects of these measures on the monetary and banking system of the country which was completely dominated by the government's fiscal policy, and with the consequences thereof, which were momentous in character.

The cost of carrying on any serious war under modern methods has become staggering in amount. This is due in part to the enormous armies which our present-day economic order makes it possible to employ and in part to the vastly greater material equipment per combatant which modern technology has devised for use in fighting. Some idea of this increase in cost can be gathered from the fact that, whereas the total direct cost of the Napoleonic wars from 1793 to 1815 has been roughly estimated at some \$6.2 billion, it was figured that the United States alone, exclusive of loans to the Allies, would require twice this sum for only the first year of its participation in the first World War. At the height of wartime activity the United States was spending more in a couple of days than the estimated specie value of the total American outlay during the whole of the Revolutionary War. The prospect of such staggering costs led many to predict at the outbreak of the war that economic exhaustion would soon bring it to an end. Though not over-estimating the costs, such forecasts failed to appreciate the full possibilities of the financial mechanisms inherent in the present order, as the subsequent account will show.

It was originally estimated that for the first fiscal year of the war starting July 1, 1917, the United States would require about \$12 billion, about a third of which would be needed for loans to other countries; before the end of 1917, this figure was raised to \$18 billion—about one-third of the estimated total national income at that time. It was obvious that to divert any such sum to the Federal government (which previously had been obtaining less than \$1 billion a year) without serious effects upon the people was no simple problem. As the borrowing of any appreciable amount from other countries was impossible—rather we were being asked to lend—the financing had to be done within the country. An increase in the national income through increasing production might contribute something to government needs. The large annual savings, perhaps between \$4 and \$6 billion at this time, might be extensively drawn upon. For a while at least the sums normally set aside to replace

durable capital and consumers' goods could be reduced and similarly diverted. The remainder would have to come in the main from reducing the usual outlay for consumption purposes.

Congress, confronted with deciding upon the methods to be employed in obtaining the required sum, discussed the relative advantages of borrowing and taxation; the possibility of issuing paper money, such as the greenbacks of the Civil War or the continental currency of the Revolution, was considered unwise. In favor of taxation it was argued: that being compulsory, revenue was more certain; that this would compel saving on the part of the taxpayers; that a proper adjustment of the taxes would compel those benefiting financially from the war to contribute towards its cost; that the people were in a patriotic mood amenable to taxation; and that taxation would avoid the dangers of inflation incident to extensive borrowing, including an increased cost of the war. In favor of borrowing it was urged: that it was possible thus to secure funds much quicker; that it was an easier, more adaptable method from the point of view of the public and would cause less opposition to the war; that it would involve less disturbance of business adjustments, and less discouragement of business activity; that it would teach people induced to buy government bonds to save; and that it was a method by which a portion of the cost could be shifted to the future generations that presumably would benefit from the war.

Except for the last, there was some truth in all of these arguments. But as long as the war had to be financed within the country, the hope of shifting the burden to future generations was vain, though widely accepted. A war cannot be fought with future goods and services; the existing supplies, thus consumed in destruction, decrease by that much what is available for other purposes for the existing generation. In so far as such destruction results in the succeeding generation's inheriting less in the form of accumulated goods than it otherwise would have, the burden will accrue regardless of the method employed to finance the war. It is equally obvious that if, in the generation following a war financed by government borrowing within the country, all of the resulting government debt then held within the country were canceled, it would not increase the quantity of goods and services available to that generation as a whole; it would only alter the distribution of claims to such goods and services among different groups within the nation.

It is this effect—the alteration of the distribution of the burden among different individuals or groups, both in the generation waging the war and in subsequent generations—that is the important consequence of the choice between borrowing or taxing. That certain groups at least clearly recognize this fact may be fairly inferred from their advocacy of the policy of borrowing where they fear the policy of taxation would hit them

personally. But it must be admitted that the general and indiscriminating hostility to taxation is an important influence working in favor of the borrowing policy. Yet, as long as most people continue to believe that the burden of a war financed within the country can be shifted to a future generation by resort to borrowing, this will remain a serious obstacle to the choice of a farsighted and equitable policy of war financing.

Raising the Money. In actual practice the choice of policy is commonly one as to the proportion of the fiscal needs to be raised by taxation and that to be raised by borrowing, since it is seldom practicable to finance any serious war by either method exclusively. The undesirable consequences of relying too heavily on borrowing during certain of our earlier wars led some people to argue in 1917 that the government should try to raise at least one-half of the needed funds by taxation. Congress, however, took a different point of view and it was decided to secure through taxation about \$3.5 billion and to borrow the remainder.

To draw up and enact an important revenue law is a task that Congress cannot accomplish speedily and it was not until half a year after the country entered the war that the revenue act of October, 1917, became a law. Under this act the income tax rates were raised, especially the surtax on the higher incomes, the peak rate being 63 per cent; the estate taxes were advanced about one-third and there was a heavy graduated excess profits tax. In addition, the old excise taxes on tobacco and liquors were greatly increased and numerous new taxes imposed, such as those on transportation and various forms of luxurious expenditure, and the basic letter postage rate was raised to 3 cents. It required several months more after the passage of the law before the government began to receive any appreciable amount of the increased revenue it was intended to provide. In the meantime the war was going on and expenses were mounting rapidly so the Treasury had to go out and borrow.

The general policy followed by the Treasury in its borrowing operations during the war was (1) to put out short-term notes or certificates at frequent intervals as money was needed and (2) to pay these off with the proceeds from taxes and the sale of long-term bonds. The short-term notes were mostly sold to the banks and, except for purchases by corporations and a few wealthy individuals, were generally held by them. New issues were put out as the current fiscal needs dictated, usually every two or three weeks, and the banks were expected to subscribe for them. Since the notes were payable within a few months and, in any case, the banks' ability to absorb them was limited, the sale of long-term bonds was necessary in order to provide a popular investment which would enable the government to draw upon the savings of all the people. The four issues of bonds put out during the war were known as Liberty bonds. In order to make sure that these enormous issues should be fully sub-

scribed for, it was necessary each time to organize an elaborate educative campaign called the Liberty Loan drive. This could not be undertaken frequently and in practice was resorted to twice during each of the war years. It was expected that the proceeds from each bond sale would be sufficient, together with the current income from taxation, to pay off the outstanding short-term notes as they came due, thus enabling the banks to take new notes later, and also to provide some money over and above this for subsequent war expenditures.

In following this line of procedure the Treasury borrowed on short-time notes at the opening of the war and, in June, issued the first Liberty Loan amounting to \$2 billion and bearing interest of $3\frac{1}{2}$ per cent. The second loan, amounting to \$3 billion and bearing 4 per cent interest, was offered in November. It was oversubscribed by more than 50 per cent and the Treasury took partial advantage of this and sold over \$3.8 billion. A similar amount was offered in the third issue of May, 1918, though the interest was raised to $4\frac{1}{4}$ per cent, and was also oversubscribed, but not to the same extent. This time the Treasury decided to issue the full amount subscribed for, nearly \$4.2 billion.

The results for the fiscal year ending June 30, 1918, showed that the total expenditure of the government was considerably less than the final estimate, owing partly to the fact that loans to foreign governments fell below the amount anticipated, but chiefly to the fact that war supplies could not be turned out as rapidly as had been hoped for. The total outlay for the year, including \$4.7 billion of loans to the Allies, was \$13 billion. Toward this, taxes contributed almost \$4 billion, somewhat more than had been anticipated, and the net borrowings something over \$9 billion. The income and corporation taxes alone yielded 68 per cent of the tax revenue. Thus, as it turned out, taxation provided almost 30 per cent of the government's total outlay. This was a much better record than the country had ever made in any serious war and was far better than that of the chief European nations engaged in the conflict. (See the charts on pages 904 and 905.)

When the time came to plan the financing for the second fiscal year of the war, it was estimated that the government would need to raise \$24 billion, including an allowance of \$6 billion for loans to other countries. Encouraged by the results of the first year, it was decided to try and raise one-third of this amount by taxation. Congress began planning a revenue bill accordingly but, before it was ready for final action, the war came to an end. This necessitated a revision of the fiscal needs and the estimate was then cut to \$18 billion, the proportion to be raised by taxation remaining as before at one-third. Congress changed the proposed bill accordingly and, though it was not passed until February, 1919, over three months after the war had ended, it was known as the Revenue Act

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of 1918. Despite the fact that the taxes to be levied were very much greater than the government had ever sought before, few important new taxes were included in this act. It was planned to obtain four-fifths of the total from the income and excess profits taxes and there was a heavy increase in the rates, which were made applicable to the returns covering the year 1918. Although the taxes on tobacco and liquors were raised, the advent of prohibition reduced to a negligible sum the large receipts ordinarily obtained from that source. The new taxes were mostly excise taxes covering a wide range of things, luxuries being the most important.

While Congress was considering the tax bills, borrowing was proceeding as before. The Fourth Liberty Loan was issued in October, 1918, and the full amount of the oversubscription was accepted, the total sold being nearly \$7 billion. This was much the largest issue of the war and the extent to which the public participated can be inferred from the fact that there were over 22 million subscriptions, 84 per cent of the number being for \$50 or \$100. The final bond issue, known as the Victory Loan and amounting to \$4.5 billion, was disposed of in May, 1919. It was made payable in 1923, whereas the Liberty Loans had been made payable at more distant dates distributed between 1928 and 1947. For the fiscal year ending June 30, 1919, the outlay of the government reached the highest point in its history, nearly \$19 billion, including almost \$3.5 billion lent to foreign governments. Taxation and various minor receipts contributed \$4.6 billion and the balance was met by borrowing, so that the percentage of the outlay obtained by taxation, though below that for the preceding year, was still relatively high.

The total outlay of the government from the outbreak of the war until the end of demobilization, Oct. 31, 1919, according to the estimate of the Treasury was \$34.4 billion; this excluded debt operations and postal disbursements from postal revenue but included \$9.4 billion lent to foreign countries. This sum was twice as large as the total Federal expenditure from the beginning in 1789 to the end of the nineteenth century. Practically one-third of this total was met by taxes and other minor receipts; if the foreign loans are deducted from the total, the proportion was 43 per cent. If we contrast our methods of financing this war with those of previous serious wars, we can say that in at least two respects there was a very decided improvement: (1) The incidence of the taxes fell upon those who were profiting financially from the war to a greater extent than ever before. (2) There was a more prompt and extensive resort to taxation and less dependence upon borrowing than previously. Unfortunately, however, this was not carried far enough to prevent the serious consequences of the inflationary measures that attended the efforts to aid the government's enormous borrowing operations, as will appear in the account that follows.

The Monetary and Banking Problems of the War. Throughout the war the developments in the field of money and banking were largely dominated by the fiscal needs and policies of the government. Enormous as was its demand for lendable funds, there was also to be considered the large demands of private business, much of which represented requirements essential to the successful conduct of the war. In the case of lendable funds as of other economic resources, it was obvious that conservation and careful mobilization of the available supply were of the utmost importance. The problem was to make sure that such funds as it might need would be diverted to the government and at as low a cost as could reasonably be asked. At the same time private business engaged in war production or in providing for the essential needs of the civilian population must be enabled to obtain funds for its requirements. Finally, it was desirable that business in general should not be disturbed by what was done any more than was necessary to accomplish these ends. The slogan of "Business as usual," so widespread at the start of the war, reflected a failure to realize that effective conduct of the war necessitated many a change; its element of truth lay in the desirability of avoiding unnecessary disturbances.

In order to sell the enormous bond issues it was necessary for the government not only to put on the Liberty Loan drives but to make it as easy and attractive as possible for people to buy the bonds. Various means were employed to serve this end. The bonds were made available in small denominations and could be paid for in installments. War-savings certificates and stamps were also provided to attract even the smallest sums. In some cases the bonds enjoyed certain exemptions from taxation. The banks made it as easy as possible to borrow for the purpose of subscribing to government bonds and notes, and borrowers offering these as security were given especially favorable rates.

To induce the banks to take the loans, the government followed a policy of greatly increasing the number of banks where its funds could be deposited and of allowing such banks to subscribe for loans by simply crediting the government deposit with the amount and then permitting them to retain the deposit until the funds were needed to meet current outlay. An amendment to the banking law under which banks were not required to maintain the legal reserves against such government deposits was also an important influence. Finally, the Federal reserve banks provided the member banks with especially favorable rediscount rates on loans backed by government paper.

The efforts of the government to minimize the disturbances in the money market arising from the simultaneous shifts of large funds between the banks and the Treasury and to keep the rate of interest down as low as possible were obviously of benefit to private business as well. The un-

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fortunate consequence of the low interest rate was to make borrowing easier and more attractive for everybody so that lendable funds were diverted into many nonessential industries. It was obvious, at a time when the conservation of capital for essential purposes was so important, that, if the usual check on borrowing which is found in a high interest rate was removed, the only method to ensure the flow of capital to essential industries and to prevent its flowing elsewhere was some form of rationing. Such action the government was finally forced to adopt.

For this purpose there was organized early in 1918 under the Federal Reserve Board the Capital Issues Committee. It requested all banks and other institutions having to do with the issue or underwriting of securities to refuse to undertake any sizable issue until the committee had approved it as being in harmony with the public interest. In the spring of that year, following the passage of an authorizing law, this work was taken over by a committee of the same name, connected with the War Finance Corporation. The financial institutions generally, though not under legal compulsion, gave the committee excellent support and the check upon nonessential issues that resulted was undoubtedly substantial.

Despite the marked success of the government in maintaining relatively easy credit conditions, there were some that were engaged in essential activities who for one reason or another found it difficult to borrow on reasonable terms. To meet this need there was organized under an act of April, 1918, the War Finance Corporation. It had a capital of \$500 million subscribed by the government with the authority to issue bonds to six times this sum. Through this means loans were extended to a wide range of activities including farmers, manufacturers, public utilities, and banks.

Most of these various measures for facilitating governmental and private financing of wartime activities necessitated an enormous expansion of credit. This depended fundamentally upon the monetary and banking system of the country; the need for that expansion in turn led to important modifications and developments in that system, the effects of which were far-reaching. What those changes were and how the system functioned in making possible this expansion are the questions to which we now turn.

Monetary and Banking Development during the War. It was fortunate for the country that the old national banking system had been displaced by the Federal reserve system, which went into operation shortly after the war opened in 1914, for no such expansion of credit as subsequently took place would have been possible under the old system. Perhaps it might be added that it was also fortunate that the war ended when it did, for it is quite probable that another year or two of war would have forced radical modifications of the reserve system. To understand the

expansion of credit that occurred after the country entered the war, it is necessary to keep in mind the changes wrought by the introduction of the Federal reserve system and the monetary and banking developments that ensued up to April, 1917.

It will be recalled that the Federal reserve system introduced provisions designed to secure greater elasticity in that element of the circulating medium made up of Federal reserve notes and also that it decreased the amount of the legal reserves which the banks were required to maintain against their deposit liabilities. These provisions facilitated an expansion of credit in the form of both bank loans and circulating money. Of the greatest importance also was the inflow of gold resulting from the heavy purchases of war supplies in this country by European nations. During the two years ending June 30, 1917, the net imports of gold amounted to over \$1 billion. This raised the total estimated monetary stock of gold in the country at that date to \$3.2 billion, as compared with \$1.8 billion three years before. Since the gold reserve was the ultimate limiting factor in the supply of bank credit put out in form of either reserve notes or deposits, the significance of this influx upon the potential expansion of credit is obvious.

In view of these developments it is easy to understand why rates in the money market remained abnormally low throughout 1915 and rose only moderately during the latter half of 1916, in spite of the great business activity that developed during that year. Here also is the reason why so very little use was made of the rediscount facilities of the Federal reserve banks previous to the close of 1916. In short the developments from the establishment of the reserve system up to this date had provided the basis for an enormous expansion of credit very little of which had actually been employed thus far. In view of the subsequent financial requirements of the country this was a most fortunate situation. Yet, despite this fact, the requirements that developed were such that additional measures facilitating credit expansion were deemed necessary.

One device for accomplishing this end was to draw into the vaults of the Federal reserve banks as much of the gold coins and gold certificates as possible, instead of leaving them in the vaults of other banks or in general circulation. The reason for this was that, when so located, they provided the basis for a larger volume of credit than when located elsewhere. This movement had started before the country entered the war and thereafter was vigorously pushed with marked success, over \$1 billion being added to the gold reserves during the war.

The process was hastened by certain amendments to the Federal reserve banking law in June, 1917, which were also very important in increasing the expansion of credit by the reserve system. One amendment first reduced the legal reserve requirements of the member banks and

then specified that all of the required reserve must be kept on deposit in the Federal reserve banks. This not only hastened the movement of gold to the reserve banks but made it easier for them to retain it, Federal reserve notes serving the member banks just as well for till money. A second amendment allowed the gold or gold certificates held by the Federal reserve agent as collateral for Federal reserve notes, then nearly \$400 million, to be counted as part of the gold reserve that the bank was required to maintain against Federal reserve notes in actual circulation. The reserve system's total ratio of cash reserve to note and deposit liabilities rose from 71 per cent just before the law took effect to 80 per cent two weeks later. Thus the effect of these amendments was greatly to increase the immediate capacity of the reserve system to expand credit.

Further to conserve the country's gold supply and prevent any unnecessary outflow, an embargo was placed on all exports of coin, currency, and bullion, except such as were approved by the government; this went into effect in the late summer of 1917. A similar purpose was served by the Pittman Act of April, 1918, which allowed the government to melt down and sell at a minimum price some of the silver held as backing for the silver certificates, a corresponding amount of which were to be retired. It was possible to use this silver, which had risen to an abnormally high price, instead of gold to meet the heavy unfavorable balance of payments due to silver-using countries of the Far East. Another group of amendments to the banking law in 1917 was designed to broaden the scope of the reserve system by inducing more state institutions to become members. As a result, membership rose from less than 50 in April, 1917, to over 900 by the end of 1918. Though these made up but 11 per cent of the state institutions estimated as eligible to membership, they possessed over half of their resources. This helped considerably to offset the weakness in the banking system arising from the division between state and Federal institutions. In addition some states were induced to allow their banks to keep their reserves in the Federal reserve banks or in the form of Federal reserve notes. It was through these and other less important devices that the country's stock of gold was conserved and much of it mobilized in the vaults of the reserve banks where it was most efficient and was made the basis for an enormous expansion of credit.

The expansion of credit that was thus made possible took two main forms: (1) an increase in the circulating medium of the country, chiefly in the form of Federal reserve notes, and (2) the increase in bank deposits arising from bank loans. The pressure for expansion on the part of the Treasury, it should be borne in mind, continued for about a year after actual warfare had ended, during which period borrowing operations were still necessary. By that time, though the pressure of the Treasury was removed, the postwar boom was in full swing and its demands carried

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the inflationary expansion to its peak in 1920 when the sharp reaction set in.

The most significant changes in the circulating medium of the country from the outbreak of the war to the peak of its expansion are shown in the following table stated in billions of dollars:

June 30	Money in circulation, in billions			Total stock of money, in billions	
	Gold coin and certificates	Federal reserve notes	Total, all kinds	Gold	All kinds
1914	\$1 6	\$0.0	\$3.4	\$1.8	\$3 7
1917	2 4	0 5	4.7	3.2	5 6
1918	1.9	1.7	5.3	3 1	6.9
1919	1.6	2 4	5.7	3.1	7 6
1920	1.2	3.1	6.0	2.8	8 1

The outstanding fact in this table is the enormous increase in quantity of money that took place during these years, an increase of 119 per cent in the total stock of money and of 76 per cent in the money in circulation. The rise in the total stock of money is due almost entirely to two things: (1) the influx of gold previous to our entrance into the war and (2) the far greater issue of Federal reserve notes, chiefly after that date. As regards the money in circulation it will be seen that the decline in gold and gold certificates, owing to their withdrawal into the vaults of the Federal reserve banks, was far more than offset by the addition of Federal reserve notes. Among the other items constituting the monetary stock of the country, shown in more detail in the chart on page 966, there were no important changes, the more significant being the decrease in silver certificates under the operation of the Pittman Act which was nearly offset by the new Federal reserve bank note issues. This increase in the country's stock of money, except for that made up of gold, was due to an expansion of credit which was based primarily on the rising government debt.

The second form of credit expansion in the shape of bank loans was very similar in its proportions. The figures for all reporting banks show that their total resources rose from \$27 billion on June 30, 1914, to over \$37 billion three years later and to \$53 billion at the end of another three years in 1920. The total of their loans and discounts for these three dates was \$15 billion, \$20 billion, and \$31 billion, respectively. In short, during these six years the banks of the country as a whole doubled the amount of their credit outstanding in the form of loans and discounts. That a limit to this expansion was rapidly approaching was only too evident in 1919.

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The process of pyramiding debts upon debts—for that was what much of the government's system of financing really meant so long as its obligations provided the security back of loans incurred to buy more government obligations—seemingly had no limit, assuming faith in government obligations to continue, except the legal limit of the required gold reserves of the Federal reserve banks.

The legal requirements, short of the emergency measures, were 40 per cent against Federal reserve notes and 35 per cent against net deposits. At

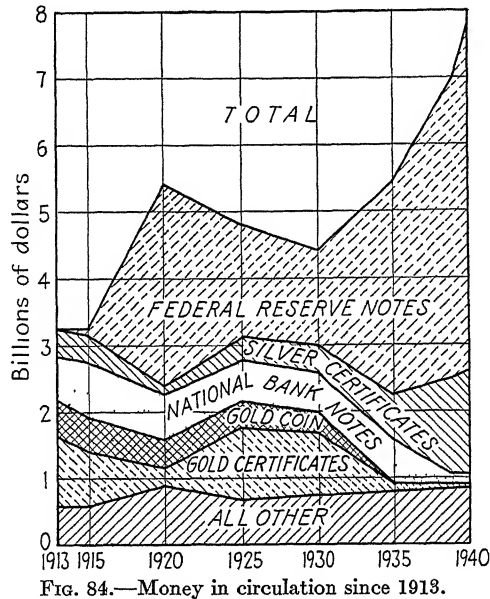


FIG. 84.—Money in circulation since 1913.

the end of March, 1917, the reserve banks' ratio of total cash reserves to net deposits and Federal reserve notes was 89 per cent; by June 15, it had fallen to 71 per cent. The going into effect of the amendments of that month shortly raised it to 83 per cent, but thereafter the general tendency was downward to 50 per cent on Nov. 8, 1918, just before the armistice. The remaining leeway for further expansion was rapidly used up by the demands of the postwar boom and by May 14, 1920, the ratio had fallen to the low point of 42.2 per cent, almost the minimum. Clearly the end of credit inflation was at hand. The realization of this was reflected in the rapid advance in money rates during the preceding months.

The Results of Credit Expansion. It must be admitted that, aided by these methods of expanding credit in the form of reserve notes and bank loans, the government was extremely successful in keeping money rates down and so in carrying out its borrowing program at very low interest

rates. Money rates advanced moderately during the course of the war, chiefly during the first 12 months of our participation; but the rise was much less than might have been expected. The rate on 60-90-day commercial paper advanced from $4\frac{1}{4}$ per cent at the start to nearly 6 per cent almost a year later, but did not rise above that figure. The rediscount rate of the Federal Reserve Bank of New York remained at 4 per cent till near the close of 1917 and at $4\frac{3}{4}$ per cent during the last three quarters of 1918. First-class railroad bonds selling on a basis to yield about $4\frac{1}{2}$ per cent at the start were selling at a yield of $5\frac{1}{2}$ per cent at the close. The last Liberty Loan of the government, sold at par, bore a $4\frac{1}{4}$ per cent interest rate, and the highest rate paid on the short-time loans was $4\frac{1}{2}$ per cent.

That the rates which the government thus secured were artificially low, made so by the elaborate devices for credit expansion and the advantages accorded holders of the government debt as previously described, is obvious. Without these aids the government would probably have had to pay somewhere between 5 and $5\frac{1}{2}$ per cent on its borrowings, at least during 1918. Despite the fact that the resulting saving in interest payments was large, the Treasury has been severely criticized for this policy. It is claimed that the undesirable consequences of this policy were: to allow considerable credit, and hence resources, to be diverted to non-essential uses; to lessen the amount of saving and, above all, to increase the process of inflation with a resulting increase in the cost of the war (which might offset the saving in interest); and finally, to aggravate the losses involved in the postwar process of deflation.

As the government had to keep on borrowing after the armistice, it still sought to keep interest rates down and, as rationing of credit was soon abandoned, the low rates helped to stimulate the postwar speculative boom. The gross national debt reached its peak in August, 1919; in the following November, the Federal reserve banks, for the first time since 1917 free from the pressure of the Treasury, slightly raised their rediscount rates. Meanwhile short-time money rates in New York had advanced sharply in June and remained high for the rest of the year. The danger signals were clear, but the momentum of the speculative boom carried on through the first part of 1920. In January the rediscount rate of the reserve bank at New York was jumped to 6 per cent and in May to 7 per cent. That month marked the peak of the rapid rise in wholesale prices. Then the reaction set in with a precipitous drop in prices during the next 12 months. Fortunately, the banking system still had sufficient powers to expand loans and the circulating medium so that the country passed through this deflationary process without the acute financial panic and unnecessary losses that had commonly attended such sudden liquidation under the old national banking system. To this extent at least the

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Federal reserve system may be said to have accomplished one of its objectives.

The Effects on the Price Level. The most important results of the government's policy of financing the war were its effect upon the general price level and the reactions that followed therefrom. The general course of wholesale prices during the period is shown by the chart on page 542. The following table shows the changes in more detail:

BUREAU OF LABOR INDEX NUMBER OF WHOLESALE PRICES

July, 1914	100	December, 1917.....	183
December, 1914.	98	November, 1918.....	206
December, 1915....	106	April, 1919..	203
December, 1916....	147	December, 1919.....	238
March, 1917.....	161	May, 1920.	272
July, 1917	187	June, 1921...	148

The uncertainties of the situation prevented any real advance during the year following the outbreak of the war. But, beginning in the last quarter of 1915, when it became evident the war would not end that year, there was a rapid rise which brought prices to a level 61 per cent above the prewar level just before the United States entered the conflict and to 87 per cent above that level in July, 1917, just before the government began to fix prices. The effects of price fixing were immediate and powerful. At first there was a slight drop in the price level and then only a slow advance to 206, a little more than twice the prewar level, at the time of the armistice.

The results of the government's price-fixing policy are more clearly brought out in a weighted index number compiled by the War Industries Board which separates the movements of 573 controlled prices and 793 uncontrolled prices. With the average of prices, July, 1913-June, 1914, as the base of 100, the index for the subsequently controlled commodities had risen to 209 in July, 1917, just before control started; the index for uncontrolled commodities had risen to only 160. As was to be expected, it was the group of commodities for which the war demand was greatest, and hence in general the price rise the greatest, that the government was most desirous to control. The powerful effects of control are shown by the fact that the index of controlled prices was always below the July, 1917, level until the war ended, falling to 189 in June, 1918, and rising to only 200 in the armistice month; whereas the index for uncontrolled prices rose from 160 in July, 1917, to 200 in November, 1918. Thereafter the system of price control was rapidly abandoned and within six months had practically disappeared.

Returning to the table given above, we see that the return of peace brought a slight decline lasting through April, 1919. But starting in July

a sudden advance set in which continued, almost without letup, until the peak of 272, or 172 per cent above the prewar level, was reached in May, 1920. This final spurt, only slightly below that of any equal war period in rapidity, can be attributed to the postwar speculative boom, aided by the too speedy removal of the price-fixing checks, the Treasury's easy-money policy up to November, and the real scarcity of some commodities due to the war. The suddenness and the extent of the drop in the price level to 148 by June, 1921, have probably not been equaled in our history; perhaps that after 1818 came nearest to it. Yet it left prices about 50 per cent above the prewar level, around which point they continued to fluctuate until after the reaction of 1929, which may be considered as the culmination of the postwar process of readjustment.

If we look back over the movement of prices during the four years of the war, it will appear to be strikingly similar to that during the like period of the Civil War. An index number of 92 similar commodities shows that up to the middle of 1862, as up to the middle of 1915, there was little change. Thereafter the rise to the peak of the Civil War movement in January, 1865, carried the level to a point 116 per cent above the prewar level; during the World War the rise was slightly less rapid, especially after price fixing began, but reached a point 94 per cent above the prewar level in December, 1918. The difference appears at the close for there was no postwar advance after the Civil War and the drop started before the war ended.

As might be expected, also, the fundamental cause for this doubling of prices was substantially the same. In both cases it was a process of inflation of money and credit; in the Civil War it took the form of greenbacks and bank loans, in the first World War of Federal reserve notes and bank loans. In the Civil War an early abandonment of specie payment took place and gold could be bought only at a premium in terms of the circulating paper money. In the World War the country was fortunately aided by the enormous inflow of gold in 1915 and 1916 and the government claimed to the end that it was on a gold standard because such money as it was willing to redeem in gold was redeemed at par. This was made possible, however, only by cutting off the chief demand for gold through a severe restriction on its export, an action which is ordinarily considered to constitute an abandonment of a true gold standard.

Even if the government claim is accepted, it must be confessed that it proved to be a standard which, owing to the inflationary devices adopted for expanding the credit based on gold, developed as great a weakness as did the greenback standard. There was, however, the advantage that, whereas it took until 1879 to get back to the gold standard after the Civil War, the free movement and redemption in gold were promptly resumed after the World War; even that gain is less certain in view of the

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subsequent abandonment of the old gold standard in 1934. At bottom the inflation of the first World War differed from that of the Civil War (except for the fortunate early influx of gold) chiefly in the more devious methods through which it was brought about under a more flexible and centralized banking system.

The inflation of the first World War, of course, brought the usual sequence of undesirable consequences in its train. The difficulties in the problems of readjustment to peacetime conditions and the inevitable process of deflation, difficult at best, were greatly aggravated. After the Civil War it was not until about 1878 that the process of readjustment could be said to have been completed. After the World War it has taken even longer, for the process does not yet appear to have been fully completed. We must admit that the difficulties of readjustment have been aggravated by postwar developments for which inflation cannot be blamed, yet it cannot escape a large measure of responsibility for the financial losses and human suffering incident to the economic reactions following 1920 and 1929.

Less serious in its consequences than those arising from aggravating the difficulties of readjustment, yet not to be overlooked, was the great injustice in the distribution of the burden of war cost which resulted from inflation, to say nothing of the resulting increase in that cost to the government. In financing war within the nation, as previously noted, the resort to borrowing with its accompanying inflation rather than to taxation does not shift the burden to another generation but may greatly alter the incidence of that burden upon different economic groups both in the existing and in succeeding generations. The debtor class gains through the opportunity afforded by rising prices to pay off its debts in depreciated dollars. The creditor class, made up of bondholders, mortgage owners, insurance holders, savings bank depositors, and others receiving fixed returns, suffers correspondingly.

Since the dollar continued, for over a decade after the war had ended, to have a purchasing power about a third less than before 1914, the injustice to those who had become creditors before that year was of long duration. Another group on whom the burden of war costs fell most inequitably was that whose wages and salaries failed to advance in proportion to the rising cost of living. This was most marked among the salaried classes, for salaries, especially those of public employees, rose much more slowly than wages. Although wage rates rose, in some cases even more rapidly than the cost of living, the general trend lagged behind this. This loss in purchasing power, however, was probably offset by the added wages from more general employment and overtime work so that the war burden on this class took the form largely of longer and more strenuous hours of labor. Certain industries such as the public utilities,

caught between rapidly rising costs of operation and the slowness of regulatory bodies in allowing an advance in rates, suffered severely in their earnings.

On the other hand the inflation of prices brought large fortuitous gains to other groups. The farmers gained a very large amount in this way up to 1920, though the subsequent reaction brought still greater losses. The situation in many lines of manufacturing was somewhat similar, though rising costs, often combined with price control, generally tended to reduce profits much sooner, and postwar losses were heavy. Greater fortuitous gains accrued to the merchandising class and the speculators in commodities because of the prolonged price rise; because of the greater ease of liquidation, the losses were less heavy when the reaction set in.

The result of these various reactions on the wealth and income of different economic groups, just as in the case of previous periods of war-time inflation, was a tremendous shift in the distribution of wealth. A large crop of new millionaires arose and, before the reaction was over, many one-time millionaires found themselves in sadly depleted circumstances. As best summarizing the main incidence of the immediate burden of war costs, we may accept that of Prof. J. M. Clark who concludes that some \$13 billion came out of increased productive effort during the years 1917-1919, but that this was nearly wiped out by the shrinkage in the national output of wealth in 1920-1921. The remaining \$19 billion came out of decreased consumption, partly among income-receiving groups such as creditors, but chiefly among the salaried classes.

If we look back over the consequences of the methods adopted for financing the war, we must confess they show that, whereas something had been learned from past experience, much still remains to be learned. More extensively than ever before, those gaining financially from the war were made to contribute to its cost, and taxes were made to provide a larger percentage of the immediate outlay than ever. Yet tax receipts were not sufficient to reduce the need for borrowing within limits such as would avoid a great inflation and all its attendant evils. Whether inflation could have been avoided must remain an open question, though there is good authority for the claim that such was possible. That the degree of inflation actually resulting could have been reduced, thus lessening the attendant evils, by a more prompt and vigorous policy of taxation is undoubted. That a policy which was as ready and prompt to conscript property as to conscript persons would have helped appears equally clear. On the assumption that it was not ignorance on the part of governmental authority, political expediency must be the chief justification for the course of action chosen. This in turn implies ignorance on the part of most, and private profit seeking on the part of some, among the masses.

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Unfortunately, these obstacles to sound war finance are also in the way of the millenium.

The Economics of War and Social Planning. Since the setting in of the depression in 1929, there has been much discussion of the need for social planning, particularly in the economic field. In view of this it is important to realize that the World War effort provides by far the most comprehensive program of social planning that this country at least has ever undertaken. Though the character of peacetime planning differs in important respects from that of wartime planning, there are many aspects of the general problem that are common to both. Because this wartime effort throws some light on the general problem, the difficulties that arose during that experience have been described in more detail than would otherwise have been justified. But before pointing out some of the more significant lessons to be learned from this experiment, we should note the chief ways in which planning for war differs from planning in times of peace.

Planning in time of war has the great advantage of a single, easily defined objective—winning the war—upon which it is assumed everybody is agreed. There may be differences of opinion as to the concrete methods by which that objective can best be attained, but the range of possibilities is narrow and decision is relatively simple. The objective in time of peace, when stated in broad terms such as the general welfare, may receive general acceptance but, when it comes to determining what that vague concept means in the concrete, there is endless variety of opinion. The answer of each individual will depend in the last analysis upon his philosophy of life, assuming he has one. The endless variety that the answers would take when translated into concrete terms is obvious, though there are doubtless many specific things upon which substantial agreement could be reached, even if people differed as to their relative importance and as to the best means for their attainment. This tremendously difficult but fundamental problem of determining the concrete objectives of peacetime planning is vastly simplified in time of war.

Another great advantage in wartime planning is the unusual spirit of cooperation and self-sacrifice aroused by patriotism. The widespread cooperation of the people with the government plans is an important factor in the attainment of its objectives. Whether it is possible to arouse and sustain such a spirit in the more humdrum years of peace is a question; we can only sadly confess that in the past in this country it has not been done.

Peacetime planning, on the other hand, has the great advantage over planning in time of war that there is seldom any such necessity for speed of action. War may break out suddenly and the outcome may be determined by the speed with which a country can mobilize its resources for

the conflict. The far-reaching reactions of the necessity for speed upon our planning in the case of the first World War have been abundantly illustrated. There is no such vital and pressing urgency in the case of peacetime planning; it can proceed more leisurely and take more time for careful consideration of its problems; it can proceed step by step and is not forced to act at once in so comprehensive a field. Yet in the long run its planning must be vastly more comprehensive in scope and must look much further into the future.

The fundamental difficulty in any really comprehensive scheme of social planning, once the objectives have been formulated in concrete terms and agreed upon, is the infinitely complex character of the problems that arise in attempting to carry out the plan, as was constantly illustrated in the first World War experience. The degree of specialization characteristic of the social order of today means that changes in the activities or functions of one element will inevitably exercise an ever widening circle of reactions which planning must consider and provide for. How great must be the concentration of control and power necessary to do this efficiently will depend on the scope of the action taken. The failure to realize the breadth of action and the concentration of control necessary was repeatedly illustrated in the war. In the war, however, this necessity was based on the need for speed as well as for the most efficient use of the nation's resources. In time of peace speed would seldom be so essential a reason for centralized control; but the need for the most economical use of resources, though perhaps less vital, would always remain. Such increased centralization of control as thus was required would in turn create new problems of public administration and of the adaptation of the whole framework of government to the planned social order. During the war, the unusual spirit of patriotic cooperation greatly lessened the difficulties arising from these problems.

The foregoing has assumed that social planning on a much broader scale than now exists in this country is being contemplated. Social planning of some sort, of course, has existed since the beginnings of organized society. If we look back over the history of this country, we see a slow yet steady enlargement of the scope of activities for which planning of some sort was adopted. That this tendency was essential and that it should be further developed, few will deny. The issue is rather at how rapid a pace it can wisely and effectively be pushed. Obviously the difficulties previously indicated in the way of carrying out a comprehensive scheme of social planning can be greatly reduced if one is content to proceed step by step at a moderate pace.

In this connection, in closing the chapter, the suggestion may be ventured that the planned elimination of two evils would do away with the causes for much the greater portion of the distress from which the

world has suffered during the last two decades—the distress which has led so many to declare the existing social order in need of sweeping alteration if it is to avoid a complete breakdown. One evil, lying in the economic order, is the instability of the standard of value, chiefly due to ineffective control over credit. A reasonably effective remedy would not be difficult to procure. The second evil, lying in the social and political order, is the growing spirit of nationalism with its attendant war. The task of devising a remedy for this is infinitely more difficult.

CHAPTER XLIV

THE POSTWAR DECADE, THE DEPRESSION, AND THE NEW DEAL

Introduction. In previous chapters dealing with particular phases of the country's economic development since 1860, the account was brought down to date for the sake of providing continuity in the treatment of each topic and making clear the evolutionary trend. But this method of treatment, it was pointed out, was an unsatisfactory one for such a period as that of the first World War where a real understanding of the course of events required a discussion of the period and its economic problems as a unit. This was done in Chaps. XLII and XLIII.

Although the general course of economic developments in the period since the war has never been so completely dominated by one fundamental factor as was the war period, it may still be urged that the unprecedentedly severe depression that broke in 1929 has had such an overwhelming repercussion upon the economic life and thought of this generation and the problems created by it are still so pressing that a survey of the period as a unit with especial reference to these problems will prove of value, and will help to clarify the interrelationships of the developments in the particular fields previously described. This will involve a consideration of such trends in the postwar decade as were factors in the depression and also in the New Deal program—an independent factor in the situation but one which reacted upon, and was in turn reacted upon by, the depression in a powerful manner.

It should be kept in mind in connection with the account that follows that the phenomenon of the business cycle is an extremely complex one which economists have only rather recently begun to study in a systematic and thorough manner and about which we have much to learn, since there is still lack of agreement on many points among theorists. While some stress one factor and others another in the complicated sequence of causal relationships that tend to generate booms and depressions, there is at least a fair agreement as to various factors or sets of conditions that play some part in the process. Though an adequate account of the depression of 1929 will require a better perspective and more study than are at present available, we can at least describe the more important developments responsible for its generation, outbreak, and subsequent course.

It is essential for an understanding of the significance of the facts and developments described in the account that follows to remember that a depression—which may be defined as a relatively low ratio of employed resources to employable resources willing to accept employment at the prevailing rates of pay—is fundamentally due to a lack of proper adjustment between the price of the various factors determining costs and the price at which enough of the product can be sold to provide full employment of resources. In other words the cost-price relationship is not such as to lead producers to believe they can fully employ resources and still sell the output at a price yielding a fair profit.

Hence the fundamental remedy is to be sought in a readjustment of the cost-price relationship. We cannot expect that, in an imperfectly organized and constantly changing economic world, the ideal of full employment of resources will ever be attained; but in ordinary times the changes taking place, which may arise from many different causes, are seldom so sudden or so sweeping in effects that the resulting maladjustments cannot be overcome without widespread and prolonged depression. This readjustment is worked out in an essentially individualistic competitive order, partly through such regional or occupational shifts in the use of resources as their mobility makes possible, but chiefly through the force of competition which, if unhindered, will induce such changes in the cost-price relationship as to give employment to those resources offered at the resulting market prices. Obviously anything that interferes with these methods of readjustment, such as restrictions on the mobility of resources and commodities or rigidities in the price structure, will prolong a depression; it may also be either aggravated or modified by new changes of various origins giving rise to additional maladjustments or hastening the readjustment.

The Legacy from the War. There is general agreement that fundamentally the difficulties that finally culminated in the depression of 1929 had their origin in developments arising out of the war. The more immediate reaction on the return of peace during the years 1919–1921, which has previously been described, brought important readjustments, but there still remained a great deal to be done before the world-wide dislocations in the economic order could be overcome. Hence a brief summary of the more important of these maladjustments, both in the United States and elsewhere, as they existed about 1920–1921 after the first reaction, is essential for understanding the subsequent course of developments.

In the United States the wholesale price level after the first precipitate drop of 1920–1921 remained about 50 per cent above the prewar level; yet hourly wage rates, outside of agriculture, were sustained at more than twice that level, while in agriculture wages of hired labor were over 70 per cent above it. Since the increase in output per man-hour had not

risen in proportion, this meant a considerable increase in labor costs per unit of product and thus was an appreciable factor in the maladjustment of the period. Another factor of the same character was the great increase in the public and private debt burden that had been incurred between 1914 and 1921, for the most part when prices were much higher than the level that prevailed after 1921. As the chart on page 983 shows, the private long-term debt had increased about 50 per cent during these years, while the gross debt of Federal, state, and local bodies had increased over five times, thus involving a large addition to the rigid element in costs represented by the added tax burden, though not all the new taxes entered into producers' costs. Interest rates, on the other hand, being determined in a highly competitive market, had fallen to a very moderate level by the beginning of 1922, aided by the easy credit based on the enormous addition to our stock of gold.

Among the chief branches of economic activity in the country, the industries directly engaged in the manufacture of war munitions had passed through most of the necessary readjustment with less difficulty than many, because the necessity for facing such a change sooner or later had been generally recognized and to some degree planned for. Other lines of manufacturing, many of which experienced heavy losses in 1920-1921, were able by restricting output and cutting some costs, often aided by reorganization or bankruptcy procedure, to make adjustments so that they were soon in a situation to show a profit, despite certain elements of high costs, at least for the time being. The most serious maladjustment was in agriculture. The fall in the price of farm products had been more drastic than that of wholesale prices generally. Yet the reduction of output was not only slight but temporary, despite the prospect of a decreased export market and the rigidity of many elements in costs of production. During the war residential building had been greatly restricted, so the postwar period opened with a serious shortage of housing and a high level of rents. The return of peace soon brought an end to the shortage of shipping, and cargo rates dropped to a low level as idle vessels were tied up in port; but, as the government owned the larger portion of the shipping most affected, the main loss fell on the taxpayers. The export trade, particularly that in farm products, faced serious problems of readjustment due to the changes created by the war in other nations as well as in the United States.

In Europe, the dislocation of the economic life still existing by 1921 was naturally far more serious than in the United States. The leading nations had been forced off the gold standard and, staggering under the burden of war, reparation, and reconstruction debts, were still, except for England, undergoing inflation. Some had been almost completely drained of gold. International trade, so much more important a factor in the eco-

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conomic life of these nations than in the United States, was faced with innumerable readjustments arising from the shifts in political boundaries as well as those in the items constituting the balance of international payments, to say nothing of the restrictive effects of the measures designed to promote national self-sufficiency or to check the drain of gold. Outside of Europe agricultural exporting countries which, like the United States, had greatly expanded production during the war, generally failed to make any lasting curtailment when the European market dwindled, and so further depressed world prices for farm products.

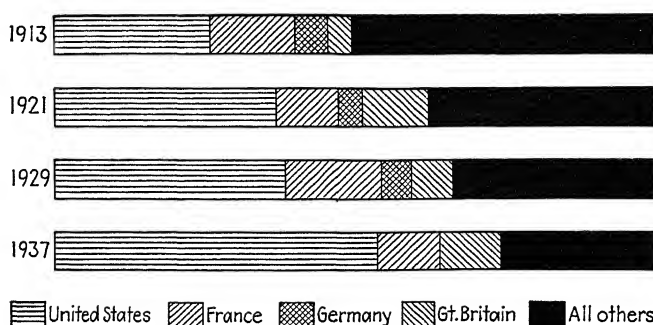


FIG. 85.—Distribution of the world's monetary gold supply, 1913-1937.

Developments Abroad, 1922-1929. When the United States emerged from the first World War, it found its economic life more closely bound up with developments abroad than at any period preceding that war since the time of Napoleon. Consequently those developments, particularly those that aggravated the maladjustments in the economic order, became important for their reaction on this country.

The most persistently disturbing development of these years and the one which had the most far-reaching reactions was the uncertainty about, and the changes in, the standard of value in various countries. Like almost everything else in the complex economic order this was in part a product of other forces. By 1925, England had returned to the gold standard with the same gold content in the pound as before. It is generally agreed that this tended to overvalue the pound and hence made the maintaining of the gold standard difficult. Italy and, eventually, France also returned to the gold standard, but only after devaluing their monetary unit to a quarter or a fifth of its former value. In Germany inflation was carried far beyond anything the world had previously known, culminating in 1923, when it required an astronomical number of paper marks to equal one of specie. Subsequently a new unit, the reichsmark, based on gold and similar to the old unit, was adopted. In this process, as also in the case of France, about four-fifths of the outstanding debts were wiped out,

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thus facilitating readjustment in this element of costs at the expense of creditors.

So, by one method or another, the leading countries struggled back to the gold standard. Then the question was whether they could remain on it or whether the existing maladjustments were so serious and the conditions requisite for the successful functioning of the system were so impaired that it could not bring about the readjustments as it had in prewar times.

One group of factors affecting the situation included reparation and war debt payments and the international movement of lendable funds. The original plans for reparation and war debt payments, being found to involve more of a burden than it was practicable to meet under the circumstances, were scaled down. Even the lower scales adopted involved payments that complicated rather than aided the process of readjustment, since they arose from noneconomic transactions and represented just so much money diverted from the normal processes working for economic adjustment. On the other hand, the international movement of lendable funds in general, at least immediately, tended to mitigate some of the existing strains. Throughout these years interest rates in Germany were abnormally high—around 8 per cent—and an enormous amount of foreign capital poured into that country, chiefly from the United States and England, the two most important lending countries. In fact the loans thus secured were considerably more than sufficient to offset the current reparation payments. Unfortunately, the proceeds were not always wisely used or were devoted to public works which yielded little or no revenue to meet interest payments. The small remnant of old Austria, which seems to have been living on its capital, was in a similar situation. There was also a considerable outflow of capital to countries exporting agricultural products such as Argentina, Brazil, and Australia. These loans were also of advantage to the lending countries in facilitating an expansion of their export trade.

In the field of agriculture the trend of world developments affecting the great staples of international trade tended to aggravate the existing difficulties. Despite the downward trend of prices for these staples in the world market after 1925 production continued to expand. Cotton acreage rose to a point a third greater than the prewar level and similar tendencies appeared in the case of wheat, sugar, coffee, and various animal products. In some countries this was stimulated by new planting areas or by the adoption of new methods that reduced production costs. But as this rising output from the chief exporting countries depressed prices, many of the older European importing countries, desiring to protect their agricultural interests and also wishing to secure a greater degree of self-sufficiency for nationalistic reasons, began to impose more severe restric-

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tions on imports, a tendency that became quite marked from 1925. This not only increased the domestic output in such countries but hastened the drop in prices at which the growing output of the exporting countries had to be disposed of in the world market, and also led to a growing accumulation of surplus stocks.

By 1925 the volume of world trade had recovered to a point 7 per cent above the level of 1913 and the output of primary commodities was 17 per cent higher, though the world's population was but 6 per cent greater; yet both trade and commodity production increased 19 per cent and 11 per cent, respectively, in the years 1925-1929. The increased demand for shipping was more than met by the additions to the postwar surplus owing to nationalistic efforts to build up various merchant marines, especially that of Germany, and shipping rates remained relatively low. Gold production, which had fallen off considerably to 1922, picked up rapidly thereafter and by 1930 was back at the prewar level. But the combination of factors affecting the international movement of gold had been such that the monetary stock was very unevenly distributed, the United States holding nearly 40 per cent and France about 15 per cent of the world's total in 1929. This, added to the other maladjustments of the period, created a situation of instability which was certain to become serious on the occurrence of any powerful unfavorable development.

Developments in the United States, 1922-1929. The decade, which in the light of subsequent events, is now sometimes spoken of as "the golden twenties," was one where, after the quick rebound from the brief but sharp postwar depression of 1920-1921, a general and rising prosperity seemed to prevail, except in the field of agriculture, where the readjustments necessary to meet altered world conditions for export staples and the ending of two decades of abnormal prosperity culminating in the war-time speculative boom had still to be carried through. The most serious situation existed in the cotton, wheat, and livestock raising areas, which had been most affected by the abnormal war demand and whose surpluses had to be disposed of in the declining world markets. Other areas, producing for the more or less protected domestic markets, also suffered, though to a less degree.

The factors outside the foreign market situation causing trouble for both groups, though in varying degree, were innumerable. The decline in the prices of farm products relative to those of commodities that the farmer bought tended to keep up farm costs of production at the same time that it decreased the farmer's purchasing power and lowered his standard of living. The cost of hired farm labor failed to fall in proportion to the decline in the price of farm products. The rapid increase in state and local debt, which continued after the war, so that by 1929 it was about three and a half times the prewar level, greatly increased the fixed

charge in the form of taxes which the farmer had to meet. Those who had borrowed to increase their acreage or equipment at the inflated price level of the war period found the fixed interest and principal payments a far heavier burden when prices had dropped. The groups whose products had to be shipped long distances by rail to reach their market and had benefited by the rigidity that modified the rise in freight rates during the two preceding decades now suffered from that same rigidity when the situation was reversed, despite some effort to extend special aid.

The chief favorable development helping to counteract these conditions was the very considerable reduction in costs made possible by technological and other improvements. Except for the combination of cheap motor vehicles and better roads, the effects of which in reducing local transportation costs were fairly widespread, these gains were apt to be limited to particular products and regions. The attempt to extend aid by means of the heavy increase in tariff duties, 1921-1922, proved of little avail, except for a few products such as wool, sugar, hides, and spring wheat, the imports of which provided a considerable proportion of the domestic consumption. Despite these conditions the general tendency of farmers was to increase production. In some cases they were stimulated by the possibility of cutting costs to a point yielding a fair return, but in most cases hoping only that increased output would yield a little larger net to meet fixed charges and leave somewhat more for living expenses.

The shortage of housing produced by the war resulted in an upward movement of rents that continued till 1924, despite the fact that most other items in the cost of living had undergone a drastic price cut in 1920-1921. Though building material costs and wage rates in this industry had fallen less than most, interest rates were relatively low. Moreover, the rapid growth of building and loan associations and the remarkable development and expansion of the market for real-estate mortgage bonds during this decade were a great aid in providing for the financing of new construction in the form of workers' homes, enormous apartment buildings, and skyscraper office structures.

Beginning about 1924, the height of the building boom was reached in the years 1926-1928, though new contracts continued fairly high for the next two years. The collapse of the speculative Florida land boom in 1926 had little restraining effect elsewhere. It has been estimated that the amount of outstanding urban mortgage debt was tripled during these years. The increase was some \$18 billion and raised the total to a sum far exceeding the bonded debt in any other important field of private enterprise. In too many cases the bonded debt imposed upon the large buildings was so grossly excessive, even at the existing rental and price levels, that, when business and personal incomes were sharply contracted, disaster followed.

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Manufacturing in general, after the reaction of 1920-1921, entered upon a period of fair prosperity as profits tended to rise, at first at a moderate pace and in 1928-1929 rather rapidly. The chief problem faced was that of adjustment to an hourly wage rate that remained at about double the prewar level although prices had fallen to a point only about 50 per cent above it. By far the most important means for making this adjustment was improved methods of production which resulted in a very substantial increase in output per man-hour. Manufacturing also gained by the decided cut in Federal tax rates as well as by being able to borrow at relatively low interest rates; certain industries facing foreign competition benefited by the higher level of tariff duties in so far as these were not offset by a lowered cost of imported goods.

On the whole a more conservative financial policy than had often prevailed in prewar times seems to have been adopted. As profits rose increases in dividends were moderate and a substantial proportion of earnings was retained in the business—most fortunately for many as subsequent events turned out. Finally, in numerous industries the immediate problem of adjustment was facilitated by the growing concentration of control over production and the various methods of restricting competition which became more widespread than ever. The combined effect of these various conditions resulted in prices of manufactured goods that were remarkably well sustained about the new level attained after the postwar reaction. The danger was that the growing rigidities would delay the continued process of adjustment.

During the war years the railroads and other public utilities, caught between rising costs and the rigidity of regulated rates, had faced a trying period of lowered earnings from which many emerged in a weak financial situation and in need of new equipment. Of the two groups the railroads were much the worse off and, in marked contrast to the other utilities, except the street railroads, the succeeding decade brought them only scanty relief. Rehabilitation and improvement of equipment promoted a striking gain in operating efficiency, made possible a great reduction in the number of employees, and helped to offset the relatively high wage rates; but the rapidly rising use of motor vehicles diverted a steadily growing volume of passenger, and then of freight, traffic and the roads were slow to meet this rivalry in an effective manner. As a result they fell considerably short of earning the legally defined "fair return."

Fortunately for the electric-light and power utilities, the situation which they faced was the reverse, for this decade witnessed an enormous expansion in the demand for their services and here, as for railroads, volume of business was a vital factor in the rate of profit. Reductions in rates, made possible by a marked increase in technological efficiency as well as greater volume, helped in turn to increase the volume still more,

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even when the reductions failed to keep pace with the lowering of costs. The high wage rates made less difference here as direct labor costs were so small a proportion of total costs. Additional savings were obtainable by integration of systems carried out under big holding companies, which, incidentally, often sold their technical services to their subsidiaries at a very profitable rate.

Thus there soon developed a highly competitive scramble among the big holding company units to acquire choice additions, frequently regardless of location with reference to the main system, and often

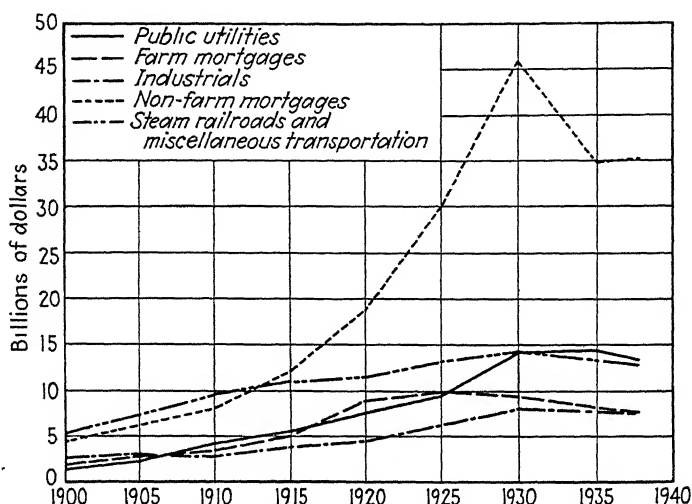


FIG. 86.—Total private long-term debt by major economic divisions, 1900-1938. (From National Industrial Conference Board, "Studies in Enterprise and Social Progress.")

resulting in the payment of fantastic prices, commonly in the form of securities, for the properties acquired. In some cases the possibilities afforded for financial manipulation for the benefit of inside groups played no small part in these activities. The outcome was a top-heavy pyramiding of security values on a basis of net earnings which, even if only moderately impaired, threatened serious disaster.

The various developments previously described, along with others, resulted in a very large addition to the outstanding volume of private long-term debt, as is shown on the chart just above. According to the estimate of the National Industrial Conference Board, the total of \$87 billion for 1929 was almost twice that for 1921 and compared with \$33 billion in 1913. On top of this the total of gross public debt had risen from nearly \$6 billion in 1913 to about five times that amount by 1921. Its subsequent increase up to 1929 was slight and, since the Federal debt was substantially cut during these years, was entirely due to a marked

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expansion of state and local debt, much of the proceeds of which went into road construction and public buildings and so created an abnormal temporary demand for the commodities these required. A total burden of long-term debt, something like three times as great in 1929 as in 1913, but a price level only about 50 per cent greater not only meant the addition of a much bigger element of rigidity in the price structure but also betokened a weaker setup in the financial structure of private business.

It remains to outline the more significant developments in the field of money, banking, and finance during the years preceding the depression. The basic monetary stock of gold in the country had risen from \$1.9 billion in 1913 to \$3.2 billion in 1917, and later dropped to \$2.8 billion in 1920. It then rose to \$4.5 billion in 1924, after which there was no marked change, except for some outflow in 1928 which had been recovered by 1930. Thus the decade saw an increase of over 50 per cent in the country's stock of gold, the total of which was raised to a point nearly two and a half times above the prewar level.

Add to this the changes in the banking system since 1913 that made possible a greater expansion of credit on a given gold basis and it can be seen why, despite the higher price level and greater volume of trade, the decade was one of comparatively easy money and lower long-time interest rates. This lower rate of interest not only was a factor in increasing the volume of long-term debt but it also tended to raise the market price of all income-yielding property. Bankers, pressed to find profitable outlets for their surplus reserves and aided by the new Federal banking laws, turned to new lines of investment and an increasing proportion of their assets took on a nonliquid form. Large sums went to the financing of installment sales, which are estimated to have risen to about \$1 billion a year. The purchasing power so secured was chiefly used to acquire more or less durable consumers' goods and created an abnormal demand for these products.

Foreign loans provided another outlet for lendable funds and some \$4.5 billion is estimated to have been invested in foreign long-term securities from 1921 to 1929 inclusive. The high interest rates prevailing in Germany attracted a large sum and the outflow to Canada and Latin America was also very substantial. These loans were significant, both immediately and subsequently, as they affected the balance of international payments and the flow of gold. Since the country, despite its newly acquired position as a great creditor nation, had shown a much stronger desire to check imports than to help its debtors to pay their obligations and so had raised tariff duties, it succeeded in retaining a favorable balance of trade, which averaged over \$700 million a year during this decade. This was a factor in the inflow of gold and, lacking some other unlikely change, that inflow would have been far greater or

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exports far less had it not been for this increase in foreign loans. Therefore the foreign loans, in so far as they stimulated exports, gave additional support to domestic prices as long as they continued to be made and, in so far as they piled up a greater foreign indebtedness to this country, simply aggravated the trouble and postponed the day when settlement had to be made.

Another outlet for surplus funds was found in the speculation on the stock markets which eventually developed into a movement far exceeding anything the country had ever before experienced. Much the greater portion of this activity centered in the New York stock exchange. As an upward trend in corporate profits appeared after 1922, it aroused new interest in the speculative possibilities of stocks and a sharp rise began in 1925 which, after being checked the following year, was resumed in 1927. In the next two years, losing all sense of proportion, it shot skyward at an unprecedented rate. A group of thirty leading industrial stocks selling about 60 per cent above the 1924 level in 1926 was selling at almost four times that level at the peak in September, 1929. At this date the total market value of stocks listed on the New York exchange, which had been \$27 billion at the opening of 1925, had risen to almost \$90 billion. A seat on the exchange, selling at a maximum of \$100,000 six years before, reached the peak of \$625,000 in 1929. The fact that by September, 1929, New York brokers' loans had risen to over \$8.5 billion suggests how extensively lendable funds had been used for the support of this speculative craze.

The Crisis Years, 1929-1933, at Home and Abroad. The crisis that now broke with such unprecedented severity descended like a stroke from the blue upon a world little suspecting, especially in the United States, what was in store for it. Possessing the great advantage of hindsight, we are able to look back over the decade of the twenties and see more clearly how various maladjustments in the economic life of the United States and the rest of the world arising from the first World War were being aggravated or only partially worked out during these years. The existence of stresses and strains in various fields was not unnoticed by those familiar with each; but few sensed the dangers inherent in the situation as a whole where a crisis in some field might start the series of reactions that would quickly aggravate the maladjustments throughout the complicated economic order and spread disaster.

In the United States the most deceiving factor in the situation was the comparative stability of the general price level after the recovery from the short 1920-1921 reaction. This, on the surface, seemed to belie the warnings as to the danger of inflation, and the action of the Federal Reserve Board showed little evidence that it sensed such a danger. The slow but steady decline in the level of prices after 1925 might have been

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taken as an ominous sign; but it was so slight up to the last of 1929 that it was commonly ignored or else taken as showing there was no danger of inflation. Warnings that stock market values were unjustified were given by some a year or two before the crash, but others insisted the country was in a "new era" which fully justified them. Banking authorities failed to take any decisive action until the movement was quite out of hand. One explanation offered for the unusual severity of the depression that followed is that it was a product of a combined downward swing in the short-, the intermediate-, and the long-term business cycles.

As events turned out, it was the crash in the New York stock market in the fall of 1929 that was the first conspicuous event to set in motion the chain of reactions that brought on the great depression. Other maladjustments were more fundamental as causes of the trouble that followed, including the subsequent drop in securities. In the last four months of 1929 the market value of stocks listed on the New York exchange decreased by \$25 billion thus losing between a quarter and a third of their value. Even then the dangers ahead were little realized. It was insisted that general business would be slightly affected and the first five months of 1930 brought a substantial advance in stock values.

Thereafter, as the effects of the fundamental factors in the situation became more obvious, the decline was resumed and when the bottom was finally reached in July, 1932, some \$74 billion, or five-sixths of the September, 1929, total, had vanished in thin air. It is obvious that, just as both the prospective and the realized profits on the preceding upswing of stocks must have been an appreciable factor in creating an abnormal temporary demand for goods that helped to sustain the price level in the latter twenties, so this tremendous shrinkage must have had an even greater effect in depressing the level during these years.

One important way in which developments in the United States reacted unfavorably on conditions abroad was through the rapid reduction and finally, the complete cessation, of foreign loans. This trend started in 1928 as interest rates rose in the domestic call-loan market, and became general in 1929, after which little but short-term foreign credits were extended and even these soon ceased. England soon adopted a similar policy and the borrowing countries faced a financial situation which at once became acute. A group of borrowing countries, which had been important exporters of agricultural products but had rapidly increased their imports while getting these loans, found, after the sharp drop in agricultural prices in 1930 on top of generally poor crops in 1929, that they were faced not only with heavier foreign debt payments but also with an unfavorable trade balance, in contrast with a decidedly favorable balance in preceding years. Furthermore, not only was the prospect of getting help by new loans cut off, but importing countries,

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by imposing new restrictions on their products, were further narrowing the market for their surpluses and so depressing world prices still more. Under these circumstances, Argentina stopped gold exports and Australia and Canada were forced off the gold standard.

The stoppage of new loans combined with the growing frigidity of bank assets and other difficulties brought on a financial crisis in Europe in 1931. Starting with a big Austrian failure in May, it spread to Germany and in July of all the banks in Berlin only the Reichsbank remained open. A moratorium on intergovernmental debts and reparation payments was arranged by President Hoover, and Germany practically abandoned the gold standard.

As English banks were known to be heavily involved in German loans, a run on sterling started with large withdrawals of foreign deposits in London, and in September England abandoned the gold standard in favor of a managed currency and the pound quickly fell in terms of gold. In this she was followed by a group of smaller countries, notably the Scandinavian, closely tied with her through trade relationships, and the resulting "sterling bloc" marked the practical ending of an effective international gold standard, though France, several of the smaller European nations and the United States still adhered to gold.

The nations that resorted to devaluation of their currency in one form or another thus secured at least a temporary advantage in foreign trade over those that did not, since this action tended to stimulate exports, check imports, and make possible an easier money policy. It was also expected to aid industries suffering from relatively high and rigid elements in costs, such as debt charges or the impracticability of reducing wage rates. Conversely it placed the countries remaining on gold at a corresponding disadvantage with deflationary effects unless they could find some means of reducing costs. Lacking this they could resort to various measures for subsidizing exports and restricting imports. Such was the line of action very commonly adopted. Thus a vicious circle was developed: deflation of prices led to depreciation of the currency and that led to trade restrictions which tended to engender a repetition of the circle.

The fall in the general level of prices during these years was precipitate and spread throughout the world. Generally it continued until 1932, though in some cases the following year brought slightly lower levels. In the more important countries the decline ranged from 30 to 40 per cent of the 1929 level. The fall was of course somewhat modified in the countries that went off gold. Generally it was more marked in the case of agricultural products than in that of manufactured goods, except where counteracted by import restrictions. The decline in agricultural prices in terms of gold in such important exporting countries as Canada, Argentina,

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and Australia was between 60 and 70 per cent, thus making the payment of foreign obligations fixed in gold currencies especially burdensome.

Although the production of manufactured goods in the chief industrial nations dropped from 30 to 50 per cent, the world's output of raw materials showed only the slightest decline from the 1925-1929 level, while the output of foodstuffs actually rose, resulting in the case of both groups in an accumulation of surplus stocks. The value of world trade in 1932 dropped 30 per cent below that of 1929, and the United States and France held almost 60 per cent of the world's monetary stock of gold. Wages in general were remarkably well sustained, in 1932 being about 5 per cent below the 1929 level in England and France and from 15 to 20 per cent below in most other countries. The number of unemployed in the world in 1933 was roughly estimated at 30 million.

Although the general trend of developments in the United States during these years was in its more fundamental features rather similar to that elsewhere, there was less inclination on the part of the administration to do anything about the situation than in most other countries. Wholesale prices fell to a point 38 per cent below the 1929 peak, the low being reached early in 1933 at a point slightly below the prewar level. Farm products, however, experienced a decline of almost 60 per cent, dropping to a point about one-third below the prewar level. Realized national income for 1933 was 44 per cent below that for 1929. Whereas wage rates of hired farm labor were cut nearly in half, those of common labor were cut only one-quarter and those of factory workers less than one-fifth.

Industrial production in 1932 was 46 per cent below that of the boom year 1929 but the index of agricultural production for 1932 was exactly the same as the average for 1924-1929. Unemployment rose rapidly and early in 1933 had reached a figure estimated at around 15 million. After 1930 interest rates fell to a low level and idle capital accumulated. The crisis that finally did arise was due to the rapidly spreading fear as to the solvency of the banks. Apparently the process of withdrawing deposits and hoarding money began about the middle of 1931 and rapidly gathered momentum in 1932. Between that time and the crisis of March, 1933, the Federal reserve ratio dropped from about 85 to 53 which betokened danger. Over \$1.5 billion was added to the amount of money in circulation. But, once such a run had gained full headway, no banking system could expect to stand up under it and, as described in an earlier chapter, when the new administration came into power in March, 1933, it found itself with a paralyzed system on its hands.

The Foreign Background, 1933-1939. Of the developments abroad from 1932-1933, when the depth of the depression was reached, until the outbreak of war in 1939, a brief summary will suffice for our purposes. As the process of liquidation slowed down and surplus stocks shrank, an

upward trend in prices appeared, further assisted in many countries by inflationary measures. By 1936-1937 a fair measure of prosperity may be said to have prevailed except in the gold-bloc countries. By 1937 the number of workers employed in the world rose to a point above the 1929 figure, though the hours of work had been cut about 10 per cent. World output of primary products in that year was about 10 per cent larger than in 1929, the increase in the raw material group being somewhat greater than that in foodstuffs. A disparity in the ratio of agricultural prices to nonagricultural, as compared with that of 1929, still remained, but had been reduced to around 10 per cent. The volume of world trade was substantially equal to the 1929 figure.

In the gold-bloc countries the deflationary effects of their policy, combined with the rigidity of wage rates and the resulting effects upon foreign trade, were becoming increasingly difficult to bear. France suffered in particular, especially as labor costs jumped under the Blum regime. Her gold began to flow out in 1935 and by 1937 her stock had been reduced more than half. The strain was too much, and between 1936 and 1938 the value of the franc in gold fell 60 per cent as a result of devaluation and abandonment of the gold standard. England and the Netherlands gained some gold but the price of \$35 an ounce offered by the United States, starting in 1934, together with other factors, attracted most of the outflow from Europe as well as the larger portion of the newly mined output, which rose to an unprecedented level. This aggravated the maldistribution of the world's gold stock. The more normal stage of economic activity that had been recovered by 1937 received a setback the next year but this loss had been fairly regained when 1939 saw the dread specter of war again make its appearance. (See the chart on page 978.)

Even during the preceding years of improvement the factor of world politics had exercised an increasingly disturbing influence upon the course of economic events. In Germany the depression had helped Hitler into power, just as postwar economic troubles in Italy had previously helped Mussolini, and thenceforth the economic life of the country was regimented with the sole aim of increasing the military power of the nation. This, with like tendencies in Italy, Russia, and, to a less extent, elsewhere, led to abnormal outlays for armament, often sustained by deficit financing, which helped to stimulate recovery. It also gave an added impetus to the nationalistic trend toward autarchy. Restrictions on international economic transactions of all sorts steadily mounted; increasingly such transactions were being negotiated by governments instead of individuals and shaped by political rather than by economic considerations.

The old economic world order was being split up into segments where the normal processes of adjusting economic relationships had less and less

scope for operation. The fact that, despite all these barriers, international economic dealings continued on as large a scale as they did only proved how vital a factor they had become in the economic life of the world.

1933-1940 in the *United States. The Problems.* Since the details of developments in different economic fields during these years have already been given in earlier chapters, attention here is concentrated on the question how these developments interacted on the general situation so as to promote or retard the attainment of the two dominating objectives of recovery and a New Deal. It may once more be emphasized that recovery was fundamentally a problem of readjusting cost-price relationships so that for this problem developments were chiefly significant as they hastened or retarded this adjustment.

To promote recovery one method of procedure that might have been adopted, at least after the banking crisis had been met, was to let things take the natural economic course and reduce governmental action to a minimum assuming that, as had been the case in the past, the competitive system would work out the necessary readjustments by carrying through the process of liquidation and price changes which had been under way since 1929. Undoubtedly this would have meant more bankruptcies and severe suffering but, once over, it would have provided the soundest basis upon which to build a return to prosperity. In opposition to such a policy, it could be argued that if the remaining pressure for liquidation could be relieved by extending financial aid to those in difficulty, at least to those not hopelessly insolvent, it would lessen unnecessary bankruptcies and alleviate pressure until conditions improved. It was also argued that the rigidities in the economic order had so increased that the mechanisms formerly depended upon to secure readjustment would prove too slow and ineffective and hence more positive governmental action was needed. Logically, this implied action along lines to decrease these rigidities. In addition it could be said that, in so far as international economic relations entered into the problem, many of the needed changes required action in cooperation with other nations to secure which governmental powers were necessary.

Although the promise of a New Deal had formed an important part of the platform on which the Roosevelt administration had been elected to power, it had not been formulated in any very specific shape. Broadly generalized, the objectives might be stated as: (1) a more equitable and socially desirable distribution of wealth and income, mainly for the benefit of the "forgotten man," particularly the laborer and the farmer; (2) an elimination of certain evils in the economic order which checked its functioning efficiently but which, if removed, would still make possible the retention of that order.

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More specifically, as subsequently carried out in action, the New Deal program centered about the following objectives: (1) Improving the condition of the laborer by strengthening his position in collective bargaining, fixing minimum wages and maximum hours, increasing his security, providing him with better, low-cost housing, and eliminating child labor. (2) Aiding the farmer by strengthening cooperative marketing, providing cheap credit and special help to tenants, improving farming methods and, through various means, by raising and stabilizing the price of farm products. (3) The elimination of certain forms of competition believed to have undesirable consequences and the stabilization of certain industries such as soft coal and petroleum where competitive waste was conspicuous. (4) Improving the monetary and banking system to promote sounder banking, check speculative excesses, insure the smaller depositors, but especially to provide such control as was needed to check the swings of the business cycle. (5) The reform of at least some of the corporation evils, through greater publicity of facts and elimination of investment trust abuses to protect investors, provision for more efficient methods of procedure in reorganization and bankruptcy, and more adequate control of public-utility holding companies. (6) The promotion of more effective regulation and coordination of rail and motor vehicle transportation facilities and an expansion of the merchant marine. (7) Increased protection for the consumer, particularly against false and misleading advertising, monopolistic prices, and excessive rates for electricity.

The Recovery Measures. The most pressing and immediate problem, as far as recovery was concerned, that faced the administration as it assumed power in March, 1933, was that of preventing unnecessary losses through forced liquidation and bankruptcies, especially in the case of the banks. The manner in which the banking crisis was handled, as previously described, provides an admirable illustration of an essentially sound method of procedure. It was so expeditious and thorough, that when the banks reopened the public confidence in them was restored and hoarding ceased. In other lines of economic activity the chief reliance was placed on the extension of government loans at low rates—a policy essentially sound and constructive provided the loans were not excessive. Revision of the bankruptcy laws also facilitated and eased the process of readjustment as did, in a far less discriminating way, the moratoria laws. Many contractual charges out of line with the altered conditions, such as rents, were revised by private agreement.

To what extent such measures prevented unnecessary losses it is impossible to judge, though it must have been very considerable. On the other hand, it is obvious that in so far as they brought about a slower and more orderly process of liquidation, they tended to delay recovery; in so

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far as they prevented a complete readjustment of cost-price relationships, they created a less sound basis upon which recovery could be built up.

As far as more positive action directed toward recovery is concerned, the main reliance of the administration was placed on the various measures designed to maintain or to raise prices. Except for the pressure to lower electric-light and power rates, the effort to ensure low interest rates, and the very belated antitrust drive, almost nothing was done to promote the needed readjustments by reducing prices that were out of line. The highly inflationary powers granted in the Thomas amendment to the Agricultural Adjustment Act of 1933 with the subsequent devaluation of the gold dollar,¹ the NRA, and most of the legislation affecting farm products, soft coal, oil, and labor were all measures designed to support or to raise prices.

This policy, of course, was generally popular and in line with the typical inflationary demands that had always arisen in times of depression. This provided some justification in so far as it produced a psychological reaction favorable to business enterprise. A better justification, from the point of view of furthering readjustment in the cost-price relationship, was to be found in the existence of the unusually large volume of long-term indebtedness created during a period of higher price levels, since the restoration of higher prices would help to correct this maladjustment. The most serious criticism of a policy of inflation was that there was no assurance that a general advance in prices, even if not uniform on different classes of goods and services, would result in the sort of cost-price readjustments essential to sound recovery.

To stimulate a general advance in the price level the administration placed its chief reliance on the devaluation of the gold dollar. Combined with the gold-purchasing policy adopted by the government (not to mention the purchase of silver), devaluation gave a great stimulus to the production of gold and led to such an enormous and wholly unexpected influx of this metal that the stock, in terms of the devalued dollar, rose from \$7.8 billion in June, 1934, to \$12.3 billion three years later. Even then, the results, although they cannot be accurately determined, very clearly fell far short of what had been hoped for. Though prices did advance, in part owing to other causes, the rise was relatively slight.

The chief and most immediate effect of devaluation on prices was the stimulus it gave to exports. Here it helped to offset the effects of the depreciation of foreign currencies, but the results were seriously limited by countervailing restrictions in other countries. Devaluation made it easier for foreign debtors to pay their American obligations, but it aggravated the difficulties of their attempts to maintain their currencies at the old

¹ The power to issue \$3 billion of United States notes to retire outstanding government obligations, which this amendment also granted, has not been used.

gold parities and to protect their gold reserves. Temporarily, devaluation may be assumed to have had a stimulating psychological effect on business, but this soon wore off as the anticipated inflation failed to materialize. The uncertainty as to further devaluation was a depressing influence. In some countries, such as England, one reason for devaluation had been the hope that it would overcome the maladjustment of high wages. In this country that gain could not be expected so long as the government was also trying to boost wages at the same time. Eventually it became evident that, as long as large amounts of economic resources remained idle, there was slight prospect of any very appreciable advance in the general price level. (See the chart on page 542.)

The inflationary monetary policy naturally had its reaction on the banking system and there its results were chiefly important in furthering the policy of cheap money and easy credit which dominated this part of the government's program for furthering recovery. Although the maintenance of low interest rates has been generally accepted as a sound policy for stimulating recovery in a period of depression, there has been a tendency to exaggerate its importance, as the events of this period made only too clear. The influx of gold and the piling up of enormous surplus reserves in the banks resulted in the lowest interest rates that the country had ever known. As far as it went this furthered the needed readjustment in the cost-price relationship. Actually it proved chiefly useful in enabling those free to do so to refund their outstanding debt at a substantial reduction in the interest charges. Also it was of great advantage to the government in its heavy borrowing for deficit financing, with the result that the interest charges on over \$40 billion of the national debt were only about the same as those on \$25 billion just after the first World War.

As far as promoting recovery by stimulating new investments was concerned the results were meager. It was evident that in most industries to create a prospect of profit sufficient to induce much new investment something more than a low cost of capital was required. Incidentally, the prolonged period of low interest rates involved a reduction of income for many individual and institutional groups of creditors that necessitated substantial financial retrenchment. Savings banks had to cut their interest rates, insurance companies faced the prospect of having to reduce dividends to policy holders or increase premium charges, and endowed educational and philanthropic institutions had to curtail their expenditures.

Relief and Public Works Measures. The provision of relief for most of the unemployed and destitute was a matter of necessity. The main questions were what form it was to take and how the cost was to be met. As the resources of private charitable institutions were totally inadequate and even many local governments found the burden too heavy to carry

by themselves, extensive resort was had to the Federal government, as was common in great emergencies. Not only could that government borrow at a low rate, but its powers of taxation made it possible to shift a portion of the burden from the poorer to the richer sections of the country.

For those who were able to work, government employment on public works or in some other form was generally considered more desirable than direct relief: it was better for the morale of the people; it would prevent the total loss of labor time through idleness; it would make possible many public improvements or services that might not otherwise be provided; and it would serve as a pump-priming stimulus to recovery, especially in the abnormally depressed construction industries.

Although it is generally accepted that a program of public expenditures involving deficit financing is desirable in a period of depression, its potentialities may have been exaggerated and other conditions essential to its success overlooked. There seems to be little ground for criticizing the general policy, whatever the disagreements as to the detailed manner in which it was carried out. The importance of speedy action prevented the most careful consideration of the varied projects in the absence of previous plans. Often the labor available was not well adapted to the work and inevitably a certain amount of politics, private graft, and other weaknesses of governmental work entered in, so that the cost of the projects was apt to be high. Nor did the pump priming, despite the large outlay, prove sufficient under the circumstances to ensure the desired recovery.

In so far as government work relieved the extreme pressure from the unemployed on the labor market, it supplemented the program for raising wages. Too frequently such relief appeared to result in an unfortunate tendency to weaken the incentive to get back into private employment. Direct relief was often very meager in amount but undoubtedly it enabled many poor families that had previously borne most of the burden of supporting dependents to shift some of this to the state and, in this way, afforded special relief to that group. It may be expected that the widespread and prolonged provision of work or direct aid by governmental units will foster habits and claims that will tend to persist even after normal economic conditions are fully restored.

The Agricultural Program. When we turn to the administration's program for dealing with agriculture, we reach a subject where both recovery and New Deal reforms played an important part in shaping legislation. Broadly generalizing, we may say that down to about 1936 the first objective was dominant, and thereafter the second was increasingly in evidence. Since this shift in emphasis was primarily a product of the marked improvement in the economic situation of the farmer during the earlier portion of the period, the program adopted must be considered with this fact in mind. As there was little reason to suppose that the

extremely low prices for the great farm staples of about 1932 would endure, there was much to be said for helping to carry the farmers not hopelessly involved through the worst years until the usual rebound of prices occurred, thus to prevent needless suffering and losses, and then gradually to withdraw the artificial support and let agricultural readjustment take the natural economic course in the belief that this would tend to bring about the best allocation of the use of economic resources. As actually developed, however, the general policy during the latter years was exactly the reverse of this. In many ways it tended to increase the artificial support given to agriculture and too often to check rather than promote readjustment of production to the changed situation.

The earlier measures designed chiefly to help the farmer through the worst of the depression may be considered essentially sound in principle. The chief criticism would not be of the general policy so much as of the tendency in its detailed administration to overlook the desirability of securing a readjustment that would prove economically sound in the long run. This was especially evident where crop loans were granted at too high a level of value and in measures resulting in loss of export markets. At this period, also, as well as later, there was too much of a tendency to stress higher prices and ignore volume of output as essential to the farmers' prosperity and to overlook the resulting reaction upon recovery in the national economy as a whole.

There is far less to be said in justification of the measures less immediately directed toward helping the farmer through the worst of the depression and of the general character of the long-run policy which was more in evidence in the later years of this period. There was good reason, as a part of the New Deal ideal of trying to help the less privileged classes, for endeavoring to counteract certain weaknesses in the economic position of the farmer. Thus the support given marketing organizations to secure the collective and orderly sale of farm products had much the same justification as the support given to promote the organization of labor so that it could bargain on more even terms. Likewise there was good reason for the effort to provide the farmer with access to lendable funds on equal terms with others.

The danger in such measures arose from the great difficulty in determining where to draw the line between action that put farmers on an equal basis with other economic groups and that which granted them special privileges. Similarly there was an essentially sound idea underlying the concept of the ever normal granary; the danger was that the use of the device, instead of being limited to lessening the fluctuations in prices between good and bad years and so securing a better distribution over the years of the use of the products, would be employed in an effort to maintain an unjustifiably high price level. Methods of conservation

admittedly desirable were fostered by a system of payments that had far too much of the character of a large subsidy at the expense of the public. The increased tariff on agricultural products obviously only tended to hasten the depletion of our natural resources.

The most serious criticism of the trend in the development of the agricultural program concerns its long-run consequences. Practically, if not avowedly, the policy adopted seems to have been based on the idea that, since organized manufacturers and laborers limited their output and kept up the price of their goods and services, as farmers had not succeeded in doing, and since it was contrary to the administration's policy to try to lower these prices, therefore, the government should exert its power to enable the farmers to do the same thing. In short it was but one phase of a general tendency to raise prices by limiting production. As a temporary method of readjustment such limitation may be desirable, but it is obvious that a long-run policy based on artificial limitation of output is not a sound method for furthering economic progress. Generally carried out to its logical conclusions, such a policy means an economy of scarcity and a lowered standard of living.

In this particular case the objective first adopted was prices for the great staple farm products which would provide the purchasing-power parity of the period 1909-1914; however, when this seemed about to be realized, it was shifted to income parity. Not only were these bases very favorable to agriculture, but there is no economic ground for assuming that any given parity should be perpetuated. In fact the general tendency was to stabilize a *status quo* and to support it by government subsidies at the expense of the general public, rather than to facilitate such a readjustment to new conditions as would eliminate the need for further public favor. Since this policy tended to prevent the most efficient allocation of the use of economic resources, it is subject to the most serious criticism.

The Labor Program. Turning to the labor program, we reach a point where New Deal objectives may be said to have been dominant from the start and promotion of recovery, though playing a part in the program, was distinctly secondary. Improvement of the condition of the laboring masses was undoubtedly the problem closest to the heart of the New Dealers and, except for the failure to secure a greater reduction in unemployment through stimulating an adequate recovery, it was in this field that their program attained its greatest successes. Probably few would disagree with the belief that in choosing this as the most important field in need of economic reforms they were well justified by the conditions. Certainly in a nation that could boast of such great wealth there was much to be desired in raising the standard of living, improving the conditions of work, and adding to the economic security of the great mass

that made up the laboring population. The question that arises here, therefore, is not one as to the desirability of the general objectives, but rather as to the means adopted for attaining them and the effects upon the other pressing problem, that of recovery.

In the first place, it must be realized that a widespread, substantial, and rapid increase in wage rates or other factors affecting labor costs (such as unemployment insurance or old-age pensions), since these costs (including that involved in raw material costs) are commonly much the largest item in total cost, is certain to cause temporary maladjustments disturbing to business and to have a depressing tendency unless the effects are offset by other developments. Such an increase can be carried through most easily in a period of prosperity when prices are advancing and there are marked gains in the efficiency of production. The idea, which has received considerable popular acceptance in the last two decades, that high wages will of themselves create greater purchasing power and thus promote recovery is one that many theorists hold to be fallacious; however, it seems to have had an influence on the administration's plan of action. Hence the initiation of a sweeping program involving higher wages and other labor costs at the very bottom of a severe depression, when the volume of unemployment was near the peak and before even normal business conditions had been attained, was economically undesirable.

Though there were some gains in efficiency, partly owing to discharge of the less able workers, they do not appear to have been sufficiently widespread to offset the higher labor costs and leave profit margins attractive enough to induce the new investment necessary for full recovery. The chief justification for taking action at this time was political in character. Election promises had been made and the party had come into office with such overwhelming power that adoption of its program could be easily obtained, and the fear of social unrest assured wide popular support. Here was a chance, such as had been impatiently awaited, to promote reforms long overdue.

The first important part of the labor program was embodied in the National Industrial Recovery Act with its codes designed to set minimum wages, limit hours, and ensure an equitable basis for collective bargaining. Along with this went all the code provisions designed to allow producers to check competition in various ways. Probably no other law ever enacted did more to introduce rigidity into the price structure of the country than this and it unfortunately came at a time when just the opposite tendency was most needed to further the price readjustments essential to sound recovery. That certain features among the code provisions were desirable, though poorly timed, should be admitted. Whether labor in general gained much aside from shorter hours is problematical in view of the increased cost of living: such gains as were obtained were more likely to go to

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the better organized groups, who were commonly less in need than the rest.

When the Supreme Court consigned the NRA to oblivion, the government took no action to replace the code provisions restricting competition, but the experience gained during the code period undoubtedly gave an impetus to the continuation of private arrangements of a similar, if less effective, character. It was not until several years later that any vigorous effort to enforce the antitrust laws was initiated, and resale price maintenance in states permitting it received Federal sanction.

In its effort to push through its labor program, however, the administration showed no inclination to desist and eventually succeeded in securing the passage of a group of even more comprehensive measures which, aided by a shift in the personnel of the Supreme Court, generally secured the approval of that body. Though by this time the improvement in general business conditions was such that the increased labor costs were less of a strain, there can be little doubt that the general effect of the program tended to retard recovery and to increase the volume of unemployment; its defense would have to rest largely on grounds of social justice.

Leaving out of account the effects upon recovery and considering the main features of the program from the long-run point of view, we may say that for the most part they provided needed economic reforms. Granting labor the right to organize without hindrance and to bargain collectively through representatives of its own choosing is simple justice under the existing economic order. The various measures designed to provide greater social security and tending to place the burdens where they can better be borne are in harmony with present social ideals. Opinion regarding minimum wage and maximum hour legislation will largely depend on the standards set and the provision for flexibility in administration. Despite the element of rigidity thus introduced, the setting of such a minimum wage as will eliminate rates characteristic of the sweatshop may be considered sound social policy. That there should be some limitation on hours practically everybody will agree; the real issue is where to draw the line and what differentiations to provide for.

The feature most open to criticism among the specific provisions of the wage and hour legislation was the fairly rapid and substantial decrease in the basic weekly hours of work above which a higher rate of pay became effective. Its chief justification is that it would spread employment; but in so far as it tended to increase labor costs it would also have a tendency to decrease the total of employment and increase the cost of living. Though detailed facts are lacking it may be doubted whether there are many occupations where such a reduction was offset by increased efficiency or was necessary to protect health. The experience of

France under the Blum government suggests the dangers involved. In the course of time an increase in productive efficiency secured through technological and other improvements might offset this, but until that occurs it means not simply more leisure time but a smaller and more costly supply of goods and services for a nation where far too many find the supply that they can buy is pitifully meager while millions still clamor for a chance to work.

Finally, the combined effect of a considerable group of measures creates a situation involving potential dangers which should not be overlooked. Not only was the power of organized labor greatly increased but it was given important additional support by the provision of various forms of relief and by the social security program which helped to relieve pressure on the labor market. This strengthening of labor's power tends to increase the rigidity of wage rates and hence the chance of greater maladjustments in the economic order. If this danger is to be avoided, it is essential that labor secure the intelligent and farsighted type of leadership which will support that adaptability of wage rates to shifting economic conditions that is required for stability of employment and economic progress.

Other New Deal Reforms. Of the other New Deal reform measures little need be added here, since the details were generally covered in earlier chapters and the effects on recovery were as a rule of minor importance. Banking legislation, after the earlier measures designed to ensure low interest rates and the extension of loans to those requiring assistance through the depression, was chiefly directed towards giving the Federal reserve authorities as well as the Federal Deposit Insurance Corporation greater control over bank credit. As far as it went, this was desirable and was made the more necessary by the inflationary monetary policy and the great influx of gold.

The obstacles to the most effective control because of the dual system of state and national banks and the distinction between member and nonmember banks still continue, and the need for ensuring wise and farsighted use of the controls available has become greater than ever. The deposit insurance system, by protecting small depositors, lessens the likelihood of a run in times of uncertainty; but it will require the most careful supervision of bank loans and investments to survive a long depression with success. Such influence as the banking measures had on recovery, after the successful meeting of the banking crisis, was favorable, though not very marked; the most important was the tendency to keep credit easy and interest rates low.

The attack on the corporation problem, and especially the evils of corporation finance, was limited in scope—in this case also largely owing to the division of powers between the states and the Federal government

and the resulting necessity for the Federal authority to fall back on indirect methods for controlling state-incorporated companies. The efforts to remedy the serious abuses of the investment trust and of the holding company in the public-utility field and to secure more publicity of facts about securities listed on the exchanges were certainly desirable. Though experience showed the need for modification in some of the details of administration, there was little justification for the frequent assertion that these measures appreciably hindered legitimate business enterprise working toward recovery.

In the field of transportation an advance was made in securing a better coordination in the control of various facilities. Rather slow progress was evident in reducing the capitalization of a few railroads, by control of reorganization plans, to a point better adjusted to the realities of the situation that they faced. In comparison with efforts to reform the financial management of electric-light and power companies, the measures directly designed to force a reduction in rates were more open to criticism. Duplication of existing facilities certainly is an uneconomic method of rate regulation, and threats to do this checked private initiative in new construction.

Concerning projects with such a complicated variety of objectives as that of the Tennessee Valley Authority, judgment at this time would be premature. It appears probable that the justification for this undertaking will depend chiefly on its contribution to power development, flood control, the economic rehabilitation of the valley, and recovery in construction industries. As a waterway its use is not promising; as providing an accurately determinable and widely applicable yardstick for fixing electric rates, its value is slight. The very substantial subsidies extended by the government to the merchant marine doubtless made a small contribution to recovery, but the real justification would have to be based on the political objective of national defense.

When it comes to measures primarily designed to aid the consumer, the achievements of the New Deal were negligible, despite the President's early declaration that this was to be one of his chief objectives. The general policy of the administration seeking to support or raise prices tended to increase the cost of living and the effect of the few efforts made to protect the consumer's interests against this tendency was insignificant in the general outcome. After having first vigorously pushed various measures intended to limit output, restrict competition, and support monopolistic organizations, the administration finally adopted an energetic policy for enforcing the antitrust laws.

The major attack was directed against the building construction industry which, especially in the large cities, was dominated by a combination of contractors, producers of building materials, and labor unions,

and supported by city building codes. The government claimed that costs were thus raised 20 to 25 per cent. By 1938 wage rates in this industry had risen to a point above the 1929 level, despite the large number still unemployed, and building materials had also been sustained at a relatively high level. The extensive program of the government to build cheap workingmen's homes had been seriously crippled thereby. Other prosecutions, the most recent in the field of war supplies, may produce some results, but the process is an extremely slow one and only eternal vigilance will ensure their being retained. A small gain for the consumer came from the reduction in rates for electricity or rural electrification, and a considerably larger gain, directly or indirectly, from low interest rates especially those for home financing, though those who were creditors found their income reduced. A bill of real importance designed to strengthen the Pure Food and Drug Act finally emerged as law in a seriously emasculated form leaving much still to be done to protect consumers against fraud and deception.

Under the New Deal, just as previously had usually been the case, it was the interests of powerful, well-organized, producer groups—industrialists, farmers, laborers, chiefly the last two with their great voting strength—that received attention; the consumer, except for the group that had to be given some form of relief to prevent starvation, was pretty much left to shift for himself. It is a question whether the two groups who were the chief beneficiaries of the New Deal—the laborers and the farmers—did not find that a goodly share of what they gained as producers, other than more leisure time, was offset by the higher prices they had to pay as consumers. In addition, sooner or later, directly or indirectly, the consumer was faced with the prospect of paying a good share of the great increase in taxes.

The Growing Taxes, Debt, and Bureaucracy. One of the most persistent and widespread among popular criticisms of the government's program was based on fears concerning the growing debt and increased taxes. That the increase of the Federal debt from over \$22 billion in June, 1933, to over \$44 billion seven years later and the growth of total taxes, Federal, state, and local, to a sum that took over a fifth of the national income involved possible dangers is not to be denied. High and rising taxes created uncertainty, checked business enterprise, and hindered recovery. The old argument that the increased debt would shift a burden to the future generation as a whole had no more validity at this time of peace than it had had during the war, yet it was true that it would add to the problems of that generation. It would increase the amount of money that would have to be transferred through taxation from one group to another to meet debt payments that became due; it was likely to add to the inflexible elements in the price structure and to make much more

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difficult any large addition to the debt should that subsequently seem necessary.

Thanks to the aid extended by the Federal authorities, the state and local governments were able to pass through the decade after 1929 with very little addition to their debt, but the unprecedented peacetime increase in the Federal expenditures raised the total public debt to a point where the burden, in marked contrast with the preceding period, was about as heavy as in the chief countries of western Europe.

It is not easy to show that any large portion of this increase in debt could have been avoided if it is granted that a further increase in taxes at this time was undesirable and that assistance was to be provided for the unemployed. Most of the increase was due to relief expenditures, direct or indirect. A substantial cut might have been secured by substituting a dole for the various work projects, but the additional outlay for these projects had various compensating advantages such as stimulating recovery, preventing the loss from idle labor, and providing public improvements. Even eliminating all the waste from inefficiency and corruption would have had only a relatively small effect on the debt increase. Less subsidizing of agriculture might have provided a better field for economizing. Moreover about a quarter of the increase in debt, being due chiefly to government loans, was offset by assets. The criticism concerning the growing debt should have been directed against an economic program that failed to secure a more prompt recovery.

Closely related to the common objection to the rising expenditure and debt was the protest against the increasing governmental interference in business and the growth of bureaucracy. In so far as these were the result of the depression they may be considered as temporary and justified, to the extent that relief and recovery measures could be justified. In so far as they were a product of the more permanent reform measures, they were in line with a long-run tendency created by the changing economic order which necessitated greater activity on the part of the government. Details of action might be subject to criticism but not the general trend of policy. Besides, the rapid expansion of these activities during this period was in no small measure due to the failure to introduce reforms in earlier years—it was trying to make up for past negligence. That a strongly entrenched bureaucracy has certain dangers is admitted, but that does not justify ill-considered restriction of governmental activities.

The Progress toward Recovery, 1933–1940. The first quick rebound from the bottom of the depression started in the spring of 1933 immediately following the general reopening of the banks. Temporarily stimulated by the NRA, it continued for about six months; but the last quarter of the year brought a slight reaction and 1934 opened with wholesale prices about 25 per cent below the 1929 level, though farm products

averaged nearer 45 per cent below that level. Production of nondurable goods, which never fell more than a quarter below estimated normal, was then a fifth below; production of durable goods, which had fallen to less than a third, was still less than half of normal. How to increase the output of durable goods was throughout one of the major problems of recovery. Estimated unemployment at this date had been cut to less than 11 million. The year 1934 brought no very marked change in the general situation except for a sharp advance in the price of farm products, largely owing to poor crops, to a point about 30 per cent below the 1929 level. This restored the price of farm products to a ratio as compared with nonfarm products which was nearly the same as had prevailed just before 1929. (See the chart on page 542.)

The period from the opening of 1935 to about the middle of 1937 was marked, at first, by a very moderate improvement and then, during the last 12 months, by a sharp advance. Production of nondurable goods reached the estimated normal by the close of 1936; what was more significant, that of durable goods rose rapidly throughout the period and by the middle of 1937 was only about 10 per cent below normal. Meanwhile unemployment had been cut to 5 million. Wholesale prices at the peak in April, 1937, were only 8 per cent below the 1929 level, and the more rapid rise of farm products carried them to within 12 per cent of that level. Realized national income for 1937 was over \$64 billion, or more than 50 per cent above that of 1933. The market value of stocks listed on the New York exchange had risen to \$60 billion at the opening of the year as compared with the 1929 speculative peak of nearly \$90 billion and the 1932 bottom of \$16 billion. On the surface, except for the still high number of unemployed, it looked as though recovery had been almost achieved.

Yet the last half of 1937 and the first of the next year brought a sudden and severe reaction. The number of unemployed doubled; the production of both durable and nondurable goods slumped to about the level of 1934; wholesale prices declined over one-tenth and farm products over one-quarter; the value of stocks listed on the New York exchange decreased \$20 billion in the last half of 1937. Though the reaction was also felt abroad it was much less severe there than in the United States.

Evidently serious maladjustments still existed. The setback has been variously attributed to a too rapid rise in costs, especially in hourly wage rates in industry which had been pushed up to a point 15 to 20 per cent above the predepression level, and in raw material costs; to the exhaustion of the 1936 stimulus from the expenditure of the soldiers' bonus and a sharp drop in government relief expenditures; to the farmers' losses from drought; to the failure to secure a better recovery in the durable goods industries; to a contraction of credit; and to an excessive accumulation

of inventories. At least it was clear that the previous efforts had not succeeded in laying the basis for a sound recovery.

Despite the sharpness of this reaction a much slower upward movement was under way in the latter half of 1938, stimulated by large crops and a revival of heavy government expenditures. This continued so that by the beginning of 1940 production of both durable and nondurable goods had recovered the percentage of estimated normal attained before the reaction occurred. Wholesale prices, however, continued to move slowly downward till August, 1939, when the outbreak of war in Europe brought them back to the level of 1934. The number of unemployed decreased very slowly and by the autumn of 1940 was still estimated at over 8 million. Lack of greater success in reducing unemployment remained the outstanding failure of the effort to promote recovery.

The Reaction of War in Europe. Of the effects likely to follow from the outbreak of war in Europe in 1939, little can be said at this time that is likely to prove of value. As the area of conflict spreads and the outcome remains quite unpredictable, all that seems clear is that a very changed world, in both its political and its economic organization, is likely to emerge from the chaos. Just how the United States will ultimately be affected thereby is too uncertain to justify speculation here though we can note the more important of the immediate reactions.

Until the spring of 1940 these reactions on the domestic economy were relatively slight. The sudden but small advance in wholesale prices that occurred at the outbreak of the war was followed by a slight downward trend for the next year. In July, 1940, the number of the unemployed was estimated at 8,200,000, one-fourth of whom were being provided with work in the WPA and the CCC, indicating that till then the war had given little stimulus toward recovery. As the war spread, the rush to get gold to safety led to an unprecedented influx of the metal into the United States; almost \$4 billion from all sources was received during the year ending July 1, 1940. This raised the country's stock to over \$20 billion (exclusive of \$1.7 billion of earmarked foreign gold deposits) or 70 per cent of the world's total. Despite the growing dislocations caused by the war, our exports and imports showed a moderate increase, only a portion of which was due to higher prices. War supplies to combatants made up the chief increase in exports though the largest relative gain regionally was in the exports to South America.

The quick series of totalitarian Germany's successes in the spring of 1940 brought a sudden general awakening in the United States to the need for a more adequate defense and a sharp realization that, to a greater degree even than in the other democracies, this had been neglected because of our feeling of ocean-given security, our antimilitaristic tradition, and our preoccupation with other problems. This task was immediately

and generally accepted as the country's most pressing problem and an unparalleled peacetime program of armament was quickly adopted involving an authorized outlay for the next few years of about \$40 billion. Two revenue acts expected to yield nearly \$2 billion in additional receipts were passed. As the national debt was rapidly approaching the statutory limit of \$45 billion, a special act allowing \$4 billion additional for purposes of national defense was passed and Congress was asked to increase the debt limit to \$65 billion, thus indicating that a large portion of the outlay for defense might be met by deficit financing.

As this program gets under way, it may be expected to provide a new stimulus to employment and recovery, though its temporary and abnormal character will create problems of readjustment in the future. How far it can be financed without engendering inflation remains to be seen, especially as popular support of lines of action with inflationary tendencies as the easiest immediate method may be expected to develop. Much more serious is the question how rapidly the program can be carried out. The experience of the First World War provided only too many striking illustrations of how much time is necessary to speed up production of needed equipment, and warfare today is much more mechanized than it was then. To attempt to maintain the basic 40-hour week in those skilled trades where there is a shortage of workers will certainly considerably increase the cost of work. Whether organized labor with its newly augmented strength will prove less willing to take advantage of the government's needs than other groups remains to be seen.

Announced plans indicate a much better appreciation of the endless complexities of the production program than was to be discerned in 1917; but it is not yet clear that the last war's lessons as to the necessity for great concentration of power and authority have won general acceptance. The danger may be exaggerated, but democracy to survive must recognize and overcome certain of its weaknesses in facing totalitarian powers. Its cherished liberty, freedom, and individual rights are ideals, however high, behind which hides much that is only a selfish concern for personal interests, a lack of a spirit of sacrifice for the common good, and insufficient thought for that good to overcome ignorance and inertia in public affairs. When sufficiently aroused by a crisis, these weaknesses can be magnificently overcome. The unfortunate thing is that it so often requires a crisis to achieve this.

The Recovery and New Deal Achievements Summarized. In any attempt to summarize the net achievement of the government in its effort to combine recovery and reform measures, which so often proved conflicting, it is proper to distinguish between the immediate and the long-run consequences, even though some of the latter still lie in the future.

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In so far as the measures directed primarily toward decreasing unnecessary losses in the process of liquidation are concerned, they were commendable in principle if not always in the details of execution, and they may be presumed to have substantially reduced losses. Though the period 1929-1932 when prices dropped so rapidly was the time when such measures would have been of greatest value, there was still much to be done when the new administration came in to promote an orderly yet thorough liquidation. Because the amount of suffering and loss thus prevented cannot be determined and because potential losses that do not materialize are quickly forgotten, the administration has not received due credit for its achievement in this undertaking.

Any summary estimate of the results of the government's activities upon the very complicated problem of recovery must be recognized as tentative and as based on general principles rather than on accurately measurable reactions. But we face the stark facts that after ten years—an abnormally long period—a soundly based and enduring recovery did not appear to have been achieved; the number of unemployed was still extremely high; and large annual deficits were still being incurred. To be sure, many conditions had greatly improved, but this might reasonably have been expected in almost any case. The question is why the government's program did not yield more substantial and enduring results.

This failure must be attributed fundamentally to the complex of measures which, after the first rebound, tended on the whole to delay rather than to hasten the process of readjusting cost-price relationships. From a purely economic point of view, as far as recovery was concerned, it was a poor time to initiate some of the most important New Deal measures; others had rather slight effect on the situation. Nor were the measures primarily designed to promote recovery always those most likely to obtain the best results under the existing circumstances. Those tending to secure low interest rates, in so far as they could be taken advantage of, did as much to lower costs and so further readjustment of the cost-price relationship as anything else. But as long as other far more important items of cost were not readjusted, this was of little influence.

In most lines of business, labor (including its proportion of raw material costs) is the largest item in costs; its high price relative to other prices after 1929 was the most conspicuous factor in the cost-price maladjustment; yet here, more vigorously than anywhere else, the government sought to maintain or to raise wage rates and related labor costs. Under these conditions the chief lines of action open to the producer were to increase general efficiency, or restrict output to a quantity that could be sold at a profit and discharge his workers accordingly. The fact that the first possibility was distinctly limited but the second almost always available largely explains the protracted large volume of unemployment.

THE POSTWAR DECADE, THE DEPRESSION

The next most serious obstacle to readjustment of costs was to be found in the varied group of measures, independent of those affecting labor, that tended to increase the cost of many materials used for further production. To the extent that the added taxes took a form that producers could not escape, another, though minor, addition was made to costs.

Since the government's program tended to increase such important elements of cost and to reduce so few, it is obvious that, short of great gains in efficiency, it would tend to increase the maladjustments in the cost-price relationship. To offset or at any rate to mitigate this tendency, a rise in the general price level might be helpful, at least if prices that were relatively too low could thus be raised more than those that were relatively high. One difficulty was that the outcome as respects this last proviso was most uncertain. The main difficulty was that under the existing conditions the devaluation of the dollar, which was the chief device employed to raise the general price level, failed to produce anything like the enduring advance that its sponsors expected.

In 1939, wholesale prices were less than 10 per cent above the level for 1932. Undoubtedly devaluation had a tendency to raise prices and the general level did advance somewhat after the first natural rebound from the bottom; but it proved impossible to sustain the greater portion of the gain that had been made by 1937. It was clear that with continued maladjustments in the cost-price relationship causing so much productive capacity to remain idle any appreciable and lasting general rise in prices was unlikely.

One explanation frequently advanced to help explain the delay in recovery was the decline in the rate of increase of the population during this decade to about half that in the twenties. There is much reason to believe, however, the influence of this factor was exaggerated and that its effects were of a minor character. Such a decline had been going on ever since 1860 and, even at the higher rate of this decade, the shifts in lines of production which it involved did not require such general or such rapid changes as to cause serious difficulty. Yet, in so far as such shifts were needed, they could have been promoted best by a program designed to eliminate rigidities in the price structure.

In view of the strength of the forces adverse to recovery, which have been noted, it may well be asked how any improvement was possible. It should be added that, besides the artificial stimuli of government expenditures and low interest rates and that of the increasing efficiency in production, there were numerous minor changes constantly being made which also helped to further needed readjustments. The obstacles, as noted, provide the chief explanation why the recovery effort did not attain a greater and more enduring success. There is good reason to believe that under the existing conditions a program which, after trying to lessen un-

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necessary losses in the early period of liquidation and providing some stimulus on the upswing, had then placed the emphasis on reducing elements of cost that were out of alignment and lessening the rigidities in the price structure would have secured not only a quicker recovery but one providing a sounder basis upon which future progress could be built.

Although recovery measures were designed to meet a situation assumed to be temporary, the New Deal reforms were intended to secure enduring changes. The cost of the more significant measures, in so far as they tended to delay recovery, has been suggested. What seems likely to be their long-run value remains to be summarized. That most of these reform measures were sound in principle, even if they often left something to be desired in the administration of detail and were from an economic point of view poorly timed, has already been indicated in the discussion of specific measures. To the extent that the New Deal altered the distribution of wealth and income in favor of laborers and farmers—independent, however, of any effects upon their cost of living—it helped the two largest groups most in need. At the start, in the case of both groups, a disproportionate amount of help went to those least in need of it, except for those on relief; but subsequently steps were taken to remedy this defect.

Among the measures affecting these two groups, those most open to criticism for their long-run tendencies were the relatively low basic weekly hours of work and the agricultural provisions which too often tended to check rather than to foster the needed readjustment to meet altered conditions. In time the effects of the former may be offset by increased efficiency in production; the effects of the second, unless substantial changes in policy take place, will be a serious and lasting misallocation in the use of economic resources. Both cases suggest a more generalized criticism of the administration's general program: it was so concerned with the problems of distribution of wealth and income that it tended to neglect the problems of production. Its primary concern with distribution was justified by the serious neglect of this problem in the past; its failure to promote greater economy in production to that extent, tended to check the possible increase in the real income of the people.

Of the other reform measures dealing with banking, transportation, security exchanges, corporation finance, etc., nothing further need be said. Taken as a whole, as far as they went and despite defects of detail, they may be considered a contribution to economic and social progress. It is the number and importance of its reform measures for which the administration deserves chief credit. Its record is another illustration of the fact, so often seen in our history, that the shock and suffering of a severe depression give an added impetus to social reform. The tragedy is that such an impetus should ever be needed.

CHAPTER XLV

THE ACHIEVEMENT: THE ADVANCE IN THE STANDARD OF LIVING, 1770-1930

Introduction. In Chap. I the point was stressed that the primary and underlying problem in the study of economic history was how a given group of people proceeded in their effort to raise their standard of living. The foregoing account has had as its main, though not the only, objective an attempt to analyze and make clear the underlying conditions and the changes made in the economic and other social institutions by which the American people sought to improve their standard of living. This was based on the belief that by studying the factors involved, by watching the evolutionary process through which the existing economic order was evolved and its problems created, and by learning the reasons for past successes or failures, we would be better fitted to guide future action and promote economic progress. Some of the more general conclusions of significance for this purpose will be given in Chap. XLVI. Here we shall attempt to suggest what the American people achieved as a result of their efforts, for it is only as we secure some conception of the results actually obtained in advancing the standard of living that we can judge of the success of those efforts.

This is the more essential because the present generation has so little conception of what living meant in terms of the concrete goods and services available to earlier generations. It takes too much of the present comparative abundance for granted and has no realization of what life was like in a frontier log cabin with an essentially household economy, or when travel was mainly on horseback, candles provided the chief light, matches and modern plumbing were unknown, frequent plagues ravaged the cities, and medicine was in its infancy. Moreover, one who has read the preceding chapters with their frequent stress on developments tending to promote economic progress and then is confronted with the statement that today a third of our families do not have even a decent standard of living will be led to inquire how real that progress was and, if real, what forms it took and who benefited by it? To suggest the answers, if only in an imperfect way, is the purpose of this chapter.

No pretense can be made of presenting here anything like a really adequate account of the advance in the American standard of living. In the first place, sufficient data do not exist and even those that are

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available, especially for the earlier period, have not been fully gathered or carefully studied. Besides, even a good summary of the available material might well fill a large-sized volume. Aside from the lack of comprehensive statistical data one of the chief difficulties in such an undertaking arises from the great variations among the living standards of different groups. It varies among the rich, the middle class, and the poor; for each of these classes it will vary among those living in cities, small towns, and purely rural districts; and it varies among different sections of the country. We have neither sufficient data nor sufficient space to describe the variations among all these groups at different periods of time. Yet, despite these obstacles, it is possible to indicate in a summary, though rather impressionistic, manner the more important of the concrete additions which were made to the American standard of living and thus obtain a fair conception of the nation's achievement in this field of effort.

In the following account the term "standard of living" is employed to cover the economic goods and services used by various groups in providing for their wants. It includes such as are supplied by the state or by philanthropic and other sources as well as those purchased. It includes the amount of leisure secured through the reduction of the time devoted to earning a living. Though some attempt is made to suggest the differences in the distribution of wealth and income and to indicate differences existing between the standards of the rich and the poor or those living in urban and rural districts, the main attention is centered upon that of the working people in both city and country who constitute the great mass of the population. Since around three-quarters or more of their living costs is represented by the outlays for food, housing with its operation, and clothing, most attention is given to these topics. However, the rising outlays for leisure time activities and the increasing importance of the contributions made by the state cannot be overlooked.

To provide a clearer idea of the progress made between periods the conditions existing around the close of the colonial era will first be described, followed by an account of the situation around 1860, and concluding with that for the period around 1930. Scarcity of data will necessitate the use of much material that is only approximately related to these dates, and will explain why many of the generalizations must be considered as tentative.

THE STANDARD ABOUT 1770

Housing. The typical dwelling on the frontier was the log cabin which, if the help of a group of neighbors was available, could be erected in two or three days. Commonly it was about 16 by 20 feet and 7 feet high with a sloping roof covered with rough hewn boards. Moss and clay

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filled the chinks between the logs. Usually there was but a single room, but if large enough a partition might be constructed and the section under the sloping roof made into an attic reached by a ladder. The floor, if not of dirt, was of puncheon slabs. In a large opening at one end the fireplace was constructed with the chimney on the outside, commonly built of stone but sometimes of twigs plastered with clay. Usually only the open door let in the light of day; if a window were made, it was filled with cloth or greased paper and had a wooden shutter. Though well-nigh universal on the frontier, the log cabin often was found in the more remote parts of other rural sections and was common for slave quarters in the South.

Typically the moderate sized frame house in time replaced the log cabin as the population in any region reached a number sufficient to support a sawmill which could turn out the required lumber products. Doubtless the great majority of the farm population and most of those making up the lower and middle classes in the towns and cities lived in such houses. In the larger places, however, especially in the middle colonies, houses of brick and sometimes of stone were fairly common, partly owing to local fire ordinances; they were also to be found scattered through all parts of the country where the raw materials were readily obtainable. The frame house of this period used relatively heavy timbers in its construction, had clapboard sides and a sloping shingled roof. Ordinarily it was one and one-half or two stories high and contained from four to seven rooms. Frequently, especially in the milder climates, the kitchen was built under a sloping roof in the rear or in a separate structure. Adjoining might be a storage shed, chiefly filled with firewood in the North, and also including a toilet, unless the latter was in an out-house. The foundation was of brick or stone and a cellar under at least a portion of the structure provided cool storage space for food. The chimney, commonly of brick, was at one side or sometimes in the center, in which case it might have fireplace openings in more than one room on a floor. The floors were of heavy, broad plank boards and the walls plastered but possibly left bare or only whitewashed. The exterior might or might not be painted. In the windows glass in the shape of small leaded panes was commonly, though by no means universally, used. Metal in the form of nails and woodwork finishings was extensively employed.

Of the dwellings of that small group that constituted the rich we possess much more authentic knowledge. Some of the stately mansions of the great planters and merchants still survive; at least the pictures of a few, such as Washington's home at Mount Vernon or the Vassal house (later Longfellow's home) at Cambridge, are familiar to most. Rooms or copies of rooms from others can be seen in various art museums. Built

of either brick or wood, often three stories high, with ten or more fairly spacious rooms, two or more chimneys might be required to serve the numerous fireplaces. Paneled walls could be found in the more important rooms or perhaps the recently introduced foreign wallpaper. In comfort and a certain dignified elegance these houses could compare with those of a like class of owners in England.

House Furnishing and Equipment. As might be expected, the furnishings of the log cabin home were both crude and extremely meager, and were almost entirely the product of the household. Poles caught in the wall and supported by posts provided the frame of a bed; fir boughs laid over a basis of tree branches, or possibly a rope, had to substitute for a mattress till something more comfortable could be obtained. Table and chairs, chests and shelving were homemade, as was much of the tableware. The metal utensils for cooking and eating, possibly a few items of pewter or crockery, and the essential gun, ammunition, knives, tools, and farm implements that could be transported were among the few items of equipment that had to be brought along. Table and bed linen might be produced in time, but bearskins or other furs could be used on the bed. The open hearth fire provided such heat as it could and most of the light, unless tallow candles were made. Water had to be carried from the nearest spring or stream.

The house equipment of the great mass of the population living in the settled districts, rural, small town, and urban, naturally provided far more in the way of both convenience and comfort, though varying greatly with the means of the family. Doubtless much of the simple furniture of the poor was still homemade, but local carpenters and cabinetmakers could provide cheap and plain chairs, tables, beds, bureaus, and chests made of pine, birch, or maple. The chairs were hard and straight but feather beds contributed both comfort and warmth for sleeping. For cooking, which was done at the open hearth or in bake ovens, utensils of iron, brass, copper, tin, and wood were in common use. Wooden plates and bowls were widely used for tableware and there was a considerable quantity of pewter, but the amount of china and glassware was extremely limited. Dried gourds served many purposes in the handling of liquids. The board floors were commonly bare, though some might have a sprinkling of fine sand and others have straw or rush matting or a few rag rugs. The walls might be of unfinished wood or covered with plaster or white-wash and carried little in the way of decoration, though light linen draperies might adorn the windows.

Of the modern house comforts commonly available at least to those not living on farms or in the slums, the features that would be most missed by anyone who had to go back to a colonial dwelling, whether one belonging to the masses or the well to do, would be those providing heat,

light, and plumbing. We may assume that for the vast majority of homes in that day the fire in the kitchen hearth provided all the heat for the house; only by keeping fairly near it could one remain comfortable in cold weather. The introduction of the Franklin stove about the middle of the century proved a great blessing for these homes and its use rapidly spread. Resembling an open hearth with iron sides placed on legs and set out in the room from the chimney wall it radiated vastly more heat than the usual fireplace. But few could afford the luxury of a fireplace in their bedroom and the prospect of retiring to a chilly bed could be mitigated only by resort to the use of charcoal warming pans. In churches, foot warmers served to lessen the discomfort in listening to prolonged sermons. Cold rooms might produce a vigorous race of such as survived, but they certainly led to many an untimely end; and the number of those who, like John Adams, wished that they could spend the chill winter months in hibernation must have been legion.

Commonly all the water used had to be brought in from the nearest spring, well, or stream. Soft rain water gathered in barrels as it ran from the roof gutters was useful for washing. Hot water had to be prepared in large iron kettles swung in over the open fire. For a hot bath, wooden or tin tubs might be available and in cold weather this operation may be presumed to have frequently involved the preempting of the kitchen. To provide the amount of hot water consumed in a hot shower bath today would have required an incredible amount of time and labor. The lack of all plumbing made sanitation and sewage disposal a burdensome problem.

The cost combined with the poor quality of the light obtainable in colonial homes was a great incentive to the habit of working from sunrise to sunset. Pine knots burning on the hearth furnished all the illumination for many a home, but candles were the main reliance of most, both rich and poor. They were made in nearly every family, usually of tallow but often of bayberries; the better but more costly spermaceti candles were turned out by a small group of producers. Oil of various types was also used, chiefly that of the whale. As the modern lamp with glass shade was still to be devised, the oil was burned in small dishes with little lighted wicks not very different from those of classical times and gave only a furtive light. Matches being unknown, fire was obtained from lighted coals when available, otherwise by the tedious process of striking a spark from a flint or a powder pan.

Though rich as well as poor suffered in varying degree from these inconveniences, the well to do found some compensation in their ability to secure other more luxurious home fittings. By this period mahogany was rapidly displacing the early oak and the later walnut of Queen Anne's period as the fashionable wood for fine furniture and the designs

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of Chippendale and his contemporaries were coming into vogue, though some preferred the more elaborate mode of the French. Such furniture was imported from England, though doubtless the greater portion of that used was turned out by colonial cabinetmakers among whom were some whose products obtained enduring fame. Oriental rugs, then known as "Turkey carpets," were beginning to appear on the floors of important rooms in the homes of the rich at this time. Wall paper was another recent importation. Also from abroad came the heavy satin and silk window drapes, the elaborate crystal chandeliers and sconces, and the ornate clocks. Native painters generally made the family portraits that adorned the walls. Besides a generous supply of pewter, the rich were making use of the more fragile china and glassware as well as the older and more durable delftware; a substantial amount of silver, no small portion of this being of domestic origin, was sure to decorate their tables and sideboards. It may be assumed that some were importing the cheaper Sheffield plated ware which had only very recently become available.

Food and Drink. As far as food is concerned the outstanding features of the general situation at this period were (1) its comparative cheapness and abundance, (2) the heavy dependence upon household or local products, (3) the very limited means for preserving foods, (4) the lack of variety in so far as the masses were concerned, especially in the cold months. There is every reason to believe that the accounts of some travelers, who typically stopped at the inns or the homes of prosperous farmers and planters, give an exaggerated idea of the variety, if not of the abundance, of food that was commonly found on the tables of the great mass of the population.

The settlers in the frontier regions, being almost completely dependent upon what they themselves could produce or find in the natural environment, were likely to suffer most both from lack of variety and scarcity, especially in the early years. The food and any livestock they might be able to bring with them, supplemented by the wild game, fish, nuts, and berries they could find about them, commonly had to suffice until their little clearing could be made to yield some grain and vegetables. Crops were uncertain at best and failures were frequent until experience revealed the products and methods of cultivation for which the soil was best adapted, and it might require several years to prepare much land for good cultivation. These were commonly years of severe hardships and endless toil for the family, with the food problem the most persistent of all.

For the great mass of the people bread was indeed the staff of life. Commonly made of corn or wheat, in one form or another, it was a substantial element, often the chief element, of a goodly portion of the meals. Meat was cheap and for most generally available, far more so than

among the lower classes in Europe. Pork in one form or another was much the most common meat, beef and veal were widely used, but mutton and lamb enjoyed little popular favor. Poultry and their products were available practically everywhere and much the same was true of dairy products, though perhaps less generally in the tidewater sections of the South; a very similar statement might be made concerning fresh fish. In the more sparsely settled sections wild game abounded and nuts and berries were common in all rural regions. Outside the large cities nearly everybody who was not shiftless could be counted upon to keep a cow and to have a garden patch, and at least a few fruit trees growing the main products best suited to the particular section. It was the careful Dutch and German farmers of the middle colonies that usually excelled all others in the quality and variety of their garden and orchard products; too many sadly neglected the variety of food thus obtainable. Those in the larger towns or cities who did not raise what they required found ample supplies of products of the region in the local markets.

Among the foodstuffs that were imported relatively few were widely used by the masses, the chief exceptions being salt, molasses, and the rum manufactured from the latter. Cane sugar was still relatively expensive and most people had to be content with molasses, wild honey, or maple sugar for sweetening. Tea, though rather widely used, was beyond the means of the poor, coffee had not then attained its modern popularity, and chocolate was consumed by relatively few. Though the colonists in general drank freely, most of them had to be content with cider, rum, some whisky, and, especially in the middle colonies, beer; the wines and brandy imported from France, Spain, Portugal, and the Wine Islands went to the tables of the upper class; the same was true of the semi-tropical fruits from the Mediterranean and the spices from the Far East.

Although the food available to most was generally restricted, because of the high costs of transportation, to that produced near each region, it was further limited by the lack of many means for its preservation. There is little indication of the use of ice in the storage of food at this period; the main reliance for keeping food fresh was the cellar or cold running water. To prevent perishable foods from spoiling they largely depended on salting, pickling, drying, and preserving. As hogs and cattle were killed on the farm or at a local slaughterhouse such of the meat as could not be promptly used was salted, smoked, or pickled; the same was true of the products of the fisheries when not packed in ice. The cost of sugar limited the amount of preserving among the poor, but it was extensively employed in many families, and the drying of such fruits as could thus be saved was general.

Under such conditions we may assume that the meals of the largest portion of the population, though commonly substantial, were likely to

be simple and monotonous. Bread and milk very likely constituted the essential portion, if not the whole, of the meal provided as breakfast and again as supper for a great many. This was all that was listed by several Boston writers in 1728 in discussing that provision for a "middling" family. At the Harvard commons in 1765, where the charge was 5s 10 $\frac{3}{4}$ d. a week, breakfast consisted of bread and butter with the choice of milk, coffee, tea, chocolate, or beer as a beverage. At supper bread and milk appeared again, perhaps accompanied by a stew or pie including meat left over from the midday dinner. At noon the students were given a pound of meat, boiled or roasted (on Saturdays fish), two potatoes, pudding, cabbage or greens in season, bread, and cider. Meat, in one form or another, could be expected by most for at least one meal and it was accompanied by a supply of the common vegetables of the locality in season. Especially widespread was the combination of these in various forms of stews or substantial soups, which somewhat helped to vary the monotony and also made economic use of leftovers. Dessert was apt to be a pudding, bread or hasty puddings being very common, but pies were frequent. Fresh fruits and berries in season, when raised on the farm or garden, afforded a welcome change. The food provided the slaves on the Southern plantations consisted chiefly of corn meal, hominy, or rice with an allowance of salt pork and a little molasses, but might be augmented by such produce as the slave was allowed to raise for his own use.

Despite the conditions limiting the variety of available foods, the wealthy and at least a substantial portion of the middle class appear to have had a considerable range of choice in what might be offered if we can fairly judge from accounts concerning the fare provided at the better inns or that set before guests at the homes of the prosperous.

For breakfast, bread in various forms, eggs, pancakes or fried hominy, several cold meats, pies, and a choice of beverages. For dinner, which was likely to come around two or three o'clock, there might be soup, fish, roasts, fowl, several vegetables, pastries, pudding, and fruits, a variety of wines or other liquors and numerous relishes and preserves. Tea might be provided in the late afternoon and at eight or nine in the evening a substantial supper with numerous kinds of bread, cold meat, and drinks.

Clothing. The chief features of the clothing of this period were (1) the marked contrast between that worn by the working classes and that worn by those groups thought of as the gentry. (2) The garb of the workers was as simple, plain, coarse, and eminently practical as that of the gentry—that of the men as well as that of the women—was the reverse, especially that for dress occasions. (3) By far the greater portion was made in the home; some might be made to order by the tailor, dressmaker, or

milliner or, like shoes and hats, bought of local craftsmen. Only the well to do could afford things that were imported.

In the frontier settlements the clothing of the men was appreciably influenced by that of the Indians. A loose hunting shirt of coarse linsey or possibly of deerskin was held together by a belt to which various things could be fastened and a cape gave added protection from wet and cold. Breeches and leggings of similar material covered the legs and hips, deerskin moccasins replaced shoes, and caps were of felt or fur. The women had dresses of linsey (linen warp and wool woof), crude shoes, if not barefooted, and a kerchief for head cover.

The clothing of the laboring population was mostly homemade and designed almost solely for economy and utility with little thought of adornment. The material used was generally coarse linen or a mixture of flax and wool, often leather in the case of men. Workmen wore long shirts or blouses supplemented, when warmth was required, by a vest or coat, knee breeches, wool stockings, and coarse shoes. A felt hat and, for working hours in many trades, a long leather apron completed the outfit. The women wore short-skirted gowns of wool or linsey-woolsey or in summer of calico with a linen collar or colored kerchief about the neck, wool stockings, and coarse shoes. For "Sunday best" either sex might have garments of a better quality but of very similar character, except for the features designed to facilitate work.

Concerning the wardrobes of the prosperous class, especially that for dress occasions, we have far more satisfactory information from detailed contemporary accounts and family portraits that still survive. The garb of the men, in marked contrast with that of later times, rivaled that of the women in its brilliance of color and costliness with silks, satins, velvets, embroidery, braid, lace, ruffles, and fine linen. The long-tailed coat, cut away in front, displayed a brilliant vest and linen shirt with ruffles and lace; silk or satin knee breeches, silk stockings, and shoes with silver buckles adorned the lower limbs. Though the wig was going out of fashion after 1770, the hair was powdered, curled at the sides, and done up with ribbon in a short queue at the back. For outdoors a broadbrimmed three-cornered hat and a long woolen coat gave protection against the weather. Even the less formal garb for the home, such as the flowing silk morning gown or the turban was likely to be colorful if less ornate, and probably made more use of wool. A velvet suit lined with satin might cost £38; one of fine cloth was £8.

The women were eager to keep in touch with the fashions of Europe and the styles of the court of France were soon reflected in their formal dress. The brilliant silk gowns of the ladies were then made with a close-fitting bodice and long flaring skirts with flounces and ruffles, opening at the front to display an elaborate underskirt of similar material. Lace,

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ruffles, and embroidery abounded. Silk stockings and small high-heeled slippers covered the feet. The high hairdress then in vogue with its elaborate puffs, curls, powder, ribbon, and artificial flowers might require hours of the hairdresser's service. To protect it outdoors the copious calash with its collapsible frame was required, or the long hooded cloaks. In warmer weather outdoors or in the home, bright gowns of chintz or fine cambric might be worn and perhaps a Leghorn hat; simpler materials of wool or linen set off with a lace collar and cap and an apron might be used when one was employed on household duties.

Medical Care and Public Health. In the almost primitive state of medical science at this period, it was inevitable that the facilities for securing good care and proper precautions to protect the public health would be almost completely lacking. Most doctors were trained under an apprenticeship system. The first medical faculty in the country was organized in Philadelphia in 1765; the only other before the close of the Revolution was in New York in 1768. Some doctors came from abroad and a few went abroad for such training as was then obtainable. Bleeding, purging, blistering, or the use of emetics were the most common forms of treatment for a wide range of diseases where nobody today would think of applying them. Barbers commonly did the bleeding but, except for this, doctors had to act as surgeons and often as dentists as well, and had to operate without an anesthetic. Midwives, if available, presided at childbirth, and trained nurses were unheard of.

Practically all the sick had to be cared for at home. Philadelphia about 1750 started the first hospital solely for the care of the sick; New York started the second as the Revolution opened; soon after Baltimore established an infirmary in connection with an almshouse that cared for the stricken poor. It was mainly to aid the poor that public medical assistance was first extended. Except for the measures taken to prevent the spread of highly infectious diseases, which were purely defensive in character, such as quarantine and the pesthouse, there was practically no public action to promote health, sanitation, and hygiene. Such plagues as smallpox, typhus, or the devastating yellow fever, commonly brought to the city ports by ships, carried off victims by the hundred and flight to the country was the chief recourse of the inhabitants.

How much a generation living under such conditions suffered from misery and torturing pain is something that the generation of today can scarcely be expected to comprehend. The fact that, in addition to this suffering, one born into that earlier generation faced the average prospect of dying before he was thirty-five suggests one, perhaps the greatest, deficiency in the standard of living of that day.

The Contribution of the State and of Philanthropy. Turning from certain general classes of goods or services that enter into the standard of

living to that class which is provided by the state, we find that even at this period it was made up of a wide range of things, though the outstanding feature of the situation is the meagerness of the states' contribution as compared with that of today. Some of these things were provided by the state just because of their essential character and because government was set up as the only practical means by which they could be secured; others were provided, often as a supplement to private action, in the belief that considerations of social welfare made this desirable. This contribution of government naturally varied greatly from the large cities to towns, rural districts, and the frontier, where it became negligible. Most of the people, it must be remembered, lived under conditions where it was very slight. As the more important activities have been detailed in an early chapter, a summary statement to help round out the picture will suffice here.

The performance of those functions commonly recognized as the duty of the state in almost any organized society, such as providing for defense, the maintenance of law and order, protection of personal and property rights, and care for the poor was fairly well carried out according to the standards of the day, except in the frontier regions. Provision for the construction and maintenance of roads was poor and inadequate so that overland travel and transport were difficult and costly. The fact that even some years after the Revolution the per capita outlay for the postal service was only 1 cent a year suggests how meager this service must have been. In the colonies with an established church, the services provided by that institution were a function of the state. In the field of education the state did almost nothing outside the meager training provided in New England and such control of the instruction of the poor as was undertaken in other colonies. Religious bodies through parochial schools or the few denominational colleges supplied most of the rest of the schooling not obtained under private instruction. Obviously the percentage of illiteracy must have been very high.

Such concentration of population as took place in the larger towns or the few cities both necessitated a wider range of governmental activities and, through the greater centralization of wealth, made this economically more possible. Public pumps provided the only water not supplied through private initiative and, sewerage systems being unknown, the disposal of sewage, garbage, and refuse was a problem which each family had to solve. This was apt to be done with the minimum possible consideration for others. Even in the cities only the more important streets were paved, commonly with rough cobblestones. At night most streets remained practically unlighted except from house windows and the wayfarer had to carry his own lantern. Fire engines were to be found in a few places but their operation depended on the service of volunteer companies.

Citizens were expected to keep leather buckets to be filled with water and passed along a line to pour on a fire. In 1751 Philadelphia first appointed a night watchman to look out for fires in place of the citizens' watch. The provision for public health, as previously indicated, was negligible and that for public recreation nil. The insignificant contribution of local government to living at this period is well indicated by the fact that even in 1790 the per capita expenditure of New York city was only \$1.87 a year—just one-hundredth of what it was in 1935.

Leisure Time and Facilities for Its Use. The outstanding feature of the situation as regards leisure time was its scarcity, whether considered by the week, the year, or the lifetime. For the great mass, labor from sunrise to sunset was customary and where possible it often continued into the evening hours. Though the pace was moderate and, where the opportunity existed, much talk may be assumed to have accompanied this toil, there was little relief from the weekly tasks of either man or woman until the Sabbath intervened. Then, as far as possible, labor was commonly suspended, and among the stricter sects the day was largely given over to religious activities. Other holidays during the year were few and vacations were almost unknown among the masses. Nor did the course of the typical life provide much more in the way of leisure. For most children work began at a tender age and play was reduced to a minimum; cultural education was given little time and most vocational training took the form of an apprenticeship. Full-time work once started generally had to be continued till incapacity or death intervened. For the children of the well to do, work might be postponed to a later age; their wives might have more leisure, though still performing many household duties; but these men also usually worked to the last. Even the Southern plantation owners, the nearest approach to a leisure class, found much that interfered with their sports and recreation.

The facilities available for employing leisure time in the more cultural pursuits other than religious were of the most limited sort. Few possessed many books besides the family Bible. Free public libraries were unknown and such collections as that started in Philadelphia by Franklin or those in New York were available to few. Weekly newspapers, though no dailies, were published in the larger places; but their cost was prohibitive for most, and an enduring domestic magazine had yet to be founded. The first American novel was still to be written, and few of those written in England were to be found. Such little reading as was done was likely to be serious, primarily religious and secondarily political in character. The group that could be considered well read was small but notable. Theatrical productions, sometimes by foreign troupes, though still forbidden in Boston, could occasionally be seen in other cities; vocal or instrumental

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concerts were not uncommon. Art collections and museums were still in the future. Travel for any distance, except on business or to a new settlement, was seldom indulged in; where water transport was not available it was usually on horseback, though stages could be found on the few great highways. A European trip for education was confined to the rich and one for pleasure extremely rare, especially for women.

In the less serious activities of leisure time, the chief reliance was on those of a noncommercial character. For children with the time for them, sports and games not unlike those of today were available. Among adults, dancing and card playing were widely indulged in when religious scruples did not check them, along with picnics and drives. Horse racing and cock fighting with the accompanying betting were especially in evidence in the South. Hunting and fishing prevailed generally and in the North the usual winter sports could be enjoyed. The taverns and, to a less extent, the country general store provided the social gathering centers which were most widely used by the masculine portion of the neighborhood. Taverns were the place where traveling mountebanks or exhibitors of wild animals and freaks took their stand. In the purely rural districts social gatherings such as house-raising, husking bees, and quilting bees were made an accompaniment of work.

The Cost of Living. In the absence of any comprehensive statistical data nothing can be said concerning the distribution of wealth and incomes or the cost of living at this period except what may be crudely inferred from a few isolated and scattered facts. The men of wealth living in the colonies were mostly merchants, plantation owners, and holders of large landed estates. Although there had doubtless been a substantial increase in the number and size of large fortunes in the quarter century preceding the Revolution, it is unlikely that at that date there were any that exceeded \$500,000. Washington, considered one of the richest men of his time, left about that when he died in 1799 and probably had less in 1775. We know of others, but not many, who are supposed to have possessed over \$200,000. Most of the land in great estates was relatively undeveloped and had only a speculative value. The years of the Revolution brought large gains to some, as well as heavy losses to others, and it was not till then that a millionaire emerged.

Of the proportion of those who might be considered as making up the middle class we have no basis for judging and we can only guess that among the masses of laborers, artisans, and small farmers who owned homes such property as they possessed was likely to range between \$200 and \$1,000 in value, with an average of under \$400. Of the total, real property made up much the greater portion. Of the small value of the personal property owned by most the record of wills bears eloquent testi-

mony. The care with which a silver spoon, a silk dress, a bed, a chest of drawers, or a head of livestock is bequeathed shows a society where scarcity made little things important.

Concerning the cost of living we are equally uncertain. Washington's expenses while serving as President averaged nearly \$27,000 for the years 1790-1792. In view of his official responsibilities, this may be presumed to have been considerably above the level that prevailed among the rich even then. Though we are told that about 1740 a minister could enjoy a comfortable living in Boston on an annual salary of £100, he would have required somewhat more than that by 1775. A Carolina plantation overseer received £50 a year. Female domestic servants in Philadelphia in 1748 were paid £8 to £10 a year, but less in the rural districts. The fact that wages of common labor were around 35 to 40 cents a day and those of artisans ranged from 60 cents to \$1.25 provides the safest basis for estimating the cost of living for the masses. Such workers, owning their home and probably getting some food from their garden, might be expected, assuming full-time employment, to have from \$100 to \$350 a year for what they had to buy and for any saving. On the more nearly self-sufficing farm the actual cash outlay was probably between \$20 and \$50 a year. The cost of living at the bottom stratum is suggested by the fact that bids were made to supply board and lodging to the poor for a year at from £5 to £8 per person.

THE STANDARD ABOUT 1860¹

Housing. The great changes that occurred in the economic life of the country during the 85 years ending in 1860 have already been narrated. What effect these had upon the standard of living has yet to be described. Though the available data are somewhat more abundant than for the earlier period they are still far from adequate and most generalized statements must be considered as tentative.

For housing in frontier sections wherever timber was available, the familiar log cabin was still in wide use, as it was also among the poor whites and slaves of the South. In Illinois, in 1818, a two-room log cabin cost \$50 and a barn \$100. When settlers spread over sections of the prairie where trees were scarce, the sod house or dugout was likely to provide the first type of abode. Thick prairie sods piled on one another constituted the walls on top of which poles were spread to provide support for the sods that made the roof. A strip of heavy cloth or hide served for a door. If a good slope of ground was handy, a smaller dugout could be made and its size increased by a sod extension. In the milder climate of the California gold diggings, fir bough shelters helped to keep off the rain in the

¹ For many facts concerning conditions during this period, I am indebted to the unpublished doctoral thesis of Mr. Edgar W. Martin.

wet season and rough planks to make lean-tos or canvas tents soon became available for those who were not too constantly on the move.

The great mass of the population living on farms or in towns and the outskirts of cities dwelt in frame houses. In the state of New York in 1855 three-quarters of the dwellings were of this type with an average value of \$750; a seventh were of brick averaging nearly \$5,400 in value; and nearly 7 per cent were still log cabins whose value averaged \$40. An important change in methods of construction, around 1840, introduced the much lighter balloon frame in place of the old heavy timbers with their expensive mortice and tenon joining, and the still earlier improvements in sawmills helped to cut the cost of lumber. The usual structure was one and one-half to two and one-half stories high and contained from four to eight rooms of moderate size. Shingles and clapboards, the latter now usually painted, covered the exterior; the interior walls were plastered, and plank boards, customarily of pine, covered the floors. Windows, now freely employed, had larger panes of glass set in a wooden frame that opened up and down instead of outward. One, or perhaps two, brick chimneys provided outlets for the heating equipment.

In the East in the early fifties a small country cottage or farmhouse could be built for \$200 to \$500, a simple frame home of five to eight rooms for \$350 to \$1,000 and a more pretentious residence for \$3,000 and upward. Lincoln's substantial house in Springfield, which so many know in picture, was built in 1839 as a one and one-half story house, bought by him for \$1,500 in 1844, and a full story added in 1856 at a cost of \$1,300.

In some of the larger cities or factory towns the growing congestion had led to the rise of the tenement house whose evils appear to have been at their very worst around 1860. Philadelphia could still claim to be a city of homes. Conditions in Baltimore, Boston, and some of the mill towns were extremely bad, yet far surpassed in New York. Taking the country as a whole 14 out of 15 dwellings were occupied by single families and there were 5.53 inhabitants per dwelling; in Boston this figure rose to 9.3 and in New York to 14.6. This condition was largely produced by the great influx of immigrants after 1845, most of whom landed in New York. Residences whose former occupants had moved uptown were split up into one-, two-, or three-room lodgings; crowded additions were built on rear lots, many of which rose to six or eight stories. In 1865 some 15,000 tenement houses sheltered nearly 500,000 people, over half the population of the city; 15,000 lived in cellars. Rent for a single room ran from \$4 to \$7 a month and it might be shared by more than one family. Never in the country's history have the housing conditions been worse.

By this time the houses of the middle and upper classes in the larger cities were assuming a more modern appearance. Crowded together on narrow 20-foot lots with a small open space in the rear, built of brick,

often with a brown stone front, they were usually three stories high, and frequently had an English basement. The rooms were high, commonly 10 to 12 feet, and apt to be dark. In the less crowded outskirts and towns these groups built more commodious mansions set in spacious grounds, often with a stable and carriage house in the rear.

House Furnishing and Equipment. The chief new contribution to home comfort which had been made by this time consisted in the improvements in equipment and furnishing rather than in the structure of the dwelling. Among these, as far as general use was concerned, those for heating easily ranked first. It was the latter decades of this period that saw the wide introduction of the modern stove, burning wood or coal and built for use as a kitchen range or designed for living-room heating. The output of stoves rose from around 25,000 in 1830 to 1,000,000 by 1860. The use of the great open hearth in the kitchen rapidly dwindled; in the living room the fireplace opening was commonly blocked up and the pipes from the stoves set out from the wall might be carried through second-floor rooms to radiate some heat and mitigate the bedroom chill that still prevailed except as warm air rose from below. The cheerful heat of an open fire became either a luxury for the few or a necessity for those lacking stoves. Even the migrant to the frontier was likely to carry a cooking stove with him.

For the well to do central heating was now available either in the more widely used form of the hot-air furnace or the steam or hot-water heater. Either required a cellar and so increased the tendency to extend this excavation under the whole of the house. The advent of steam heat was most important for large buildings and the year 1846 is said to mark its first use in a hospital and a hotel, though in the latter it was extended only to the public rooms and not to the bedrooms. Even in large buildings steam heating does not appear to have become very common until after the Civil War.

The advantages of plumbing, though largely confined to the city upper class, were also becoming available to this generation. Hot and cold running water for the kitchen, the washbasin, and the bathtub, together with the water closet, promoted health as well as comfort; but the cost and the scarcity of city water systems limited their use. In the absence of such a system an elevated house water tank was used, generally filled with the aid of a pump, and sewage was usually carried off into an underground vault. A boiler tank attached to the kitchen stove provided the hot water, though a constant supply was seldom assured. The built-in bathtub was customarily of wood lined with copper, tin, or other metal.

Hotels were apt to lead in the introduction of these as with many other innovations. The Tremont House, erected in Boston in 1829 and

generally considered the earliest modern, first-class hotel, had baths and water closets in the basement. Bathrooms off the upper hallways and occasionally attached to a private room first appeared in New York in 1844, but in the next decade became a common feature of the best hotels. In private houses, however, such facilities were available to but few. In 1856, in New York, less than 1,400 baths and 10,400 water closets were connected with the city water system; Boston and Philadelphia seem to have been much better equipped relatively; in Albany in 1859 with over 62,000 inhabitants there were 19 private baths and 160 water closets. It may be presumed that on farms such equipment was practically unknown.

In lighting also this period saw the introduction of many an improvement. First in importance was the lamp with a glass shade, which eliminated the flicker of the candle and gave a stronger light. First employed on Argand burners around the opening of the century the glass lamp was later developed for use with various types of oil such as that from the whale or coal. Camphene was also extensively used around the close of the period. The great era of the kerosene lamp started only with 1860; candles continued in frequent use for many years longer. In the cities gas became available starting in Baltimore in 1816 and in Boston, Philadelphia, and New York soon afterwards. By 1860 it was being produced in nearly 400 different localities. At first it was employed chiefly for street lighting, then in public buildings and hotels, but only after about 1840 did it begin to be much used in the better homes. Though gas cooking stoves had been devised, very few seemed to prefer them. Friction matches became available about 1827, selling at around three for 1 cent. Though matches were much cheaper by 1850 and in wide use, many thrifty souls still rolled wastepaper into tapers to be used in carrying a flame from one place to another.

Of the numerous other innovations in the way of furnishings and equipment that had made their appearance by this time only a few can be noted. Aided by the lathe and new types of saws, inexpensive factory-made furniture was now put upon the market, constructed of the cheaper woods and often painted. For the better grades, walnut and rosewood were supplanting mahogany and Victorian designs were displacing those of the Georgian and Empire periods. The advent of upholstered furniture and the spring bed added substantially to the comfort of the few who could afford them; in the fifties hotels equipped with the latter felt it was worth advertising. After about 1850 the product of the power loom provided relatively inexpensive carpeting for the parlors or the dining rooms of the middle and upper classes, but straw matting or rag rugs were most likely to be found in the bedrooms. Thanks to the cylinder printing press, wall paper was made within the means of most. Cheap cotton fabrics

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now served for window curtains and in most houses displaced the more costly linen on beds and dining tables.

For the tables of the masses cheap queen's ware, or crockery and glass-ware, could be bought. Many made extensive use of the varied domestic pressed-glass products turned out after the twenties, but the expensive fine china and porcelain had to be imported. In the fifties the new electro-plated ware was rapidly displacing Sheffield plate. In the kitchen utensils of tin, stoneware, and glass were replacing those of wood, copper, pewter, or gourd. The factory system of the Connecticut clockmakers enabled them to turn out an excellent yet inexpensive product which was in wide use. For the windows roller shades could be bought and for the much needed protection against flies wire screens or the far cheaper cotton netting. The rich could now replace the old spinet, melodeon, or organ with a Chickering or Steinway grand piano. Along with cross-stitch or painted mottoes cheap colored prints might decorate the walls of any home, supplemented in the case of the more prosperous by family portraits in crayon or oil or an oil landscape. The invention of the daguerreotype in 1839 marked the beginning of photography, which was rapidly developed in the fifties.

Food and Drink. The period between 1775 and 1860 seems to have brought rather less striking changes in the food provided for the people than it did in the satisfaction of many other needs. As the West was opened up and better transportation facilities introduced, the large surplus of foodstuffs brought to the East or the South created a greater abundance, especially in the case of meat products. Cheaper transport, along with other developments, helped to reduce costs, notably in the case of products extensively imported such as sugar, tea, coffee, and semitropical fruits. There was a little advance in the methods of food preservation, but the actual scope of the effects was moderate. Some increase in variety and abundance and in a few cases a reduction in cost, which made the product available to the masses, were the chief gains.

The main advance in the preservation of food was the much more extensive use of ice in the home, at least among the upper classes, if we can judge fairly from the accounts of travelers and records concerning the ice trade. Artificial ice was not manufactured on a commercial basis until somewhat later, but since early in the century substantial shipments of ice had been made to points in the South accessible by water. In the North as towns and cities grew in size local companies were organized to cut ice from frozen ponds or streams, store it in sawdust-packed ice-houses, and distribute it through the summer months. In Boston a householder could have nine pounds of ice delivered daily through the five summer months for \$5. In 1856 New York was said to use 300,000

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tons a year; St. Louis and Cincinnati 25,000 and Charleston and Mobile 15,000 each. Refrigerators were now available for storage, but doubtless beyond the means of the poor. It seems probable, too, that Northern farmers by this time made a more common practice of laying in a store of ice than had previously been the case.

Foreign travelers in the forties and fifties often commented upon the extensive use of ice, the frequency of ice cream, and especially the peculiar American fondness for ice-cold drinks. It seems likely, however, that the benefits thus extended among the poorer classes were very limited, especially in the South. Moreover, those who had ice were only enabled thereby to keep fresh and cool products available in the locality. Long-distance transport refrigeration making possible the bringing in of perishable products from other regions or countries started only in the seventies.

Though the canning of food was another means of preservation introduced in the course of these years, its use was extremely limited. The first commercial canning is supposed to have started in Boston in 1821, but there was very little growth of the industry till after 1840 when the region about Baltimore developed considerable canning of oysters, and tomatoes and fruits were sometimes put up in this manner. The habit of preserving was very appreciably stimulated by the decline in the price of sugar which by 1860 was around 8 or 10 cents a pound. Methods substantially similar to those formerly employed were used for the preservation of meat or fish, but were being applied on a large scale, chiefly to hogs, as the packing industry arose in the West.

It does not appear that there were many new food products in use at this period that were not to be found in 1775; the chief difference was that, for one reason or another, the supply of various products was more generally available. Sorghum had now been added to the list of sweetenings, but the consumption of cane sugar had risen to around 30 pounds per capita. Both coffee and tea were much cheaper and less likely to be adulterated, and the former now far surpassed tea in popular favor. Similarly whisky was replacing rum and, though more slowly, beer was displacing cider. Drinking, though still widespread, had appreciably declined since the temperance movement of the twenties. The proportion of fresh meat consumed was presumably larger and included relatively more beef and lamb, but pork in one form or another retained its predominance. Shipments of early vegetables and fruits from Southern points to the city markets of the North had started on a small scale before the fifties thereby somewhat prolonging the season when such fresh products were available. Bananas had now been added to the list of imported fruits and a considerable range of foreign delicacies was available for the rich.

To what extent these developments affected the actual meals set before different groups of the population is largely a matter of surmise. In frontier and back country sections the situation was probably little altered except that a few products from distant sources, such as sugar and coffee, were a little more likely to reach them, and the period required by a pioneer settler to bring his farm to the stage where it provided an adequate supply of food was apt to be shorter.

As far as the meals provided for the great masses are concerned, the chief change by this time, as previously indicated, seems to have been an increase in the variety of the food that appeared on the table and some gain in the proportion that was fresh. The frequency with which bread and milk were served as the entire meal seems to have been very greatly reduced and mixtures such as stews and heavy soups, though still extremely common, were somewhat less in evidence. The consumption of meat among the masses had evidently greatly increased and common laborers were likely to have it in one form or another at two, if not three, of their daily meals. To immigrants this was one of the most conclusive proofs that they had reached a land of plenty. The far more common use of potatoes, and to a less extent of tomatoes, was a contrast with colonial days during most of which these vegetables had been viewed with great suspicion. Sugar, coffee, and butter were by this time fairly common elements in the laborer's fare and the use of wheat in place of corn in baking had greatly increased. As far as the fare of the plantation slaves was concerned, however, there seems little reason for supposing it had been appreciably changed from that of colonial times. Even at that it was said to be as substantial as what was commonly secured by European workers and there can be no doubt that free laborers in general fared far better than their foreign brothers.

In so far as we can judge from travelers' accounts and the fare of hotels, the meals of the upper class provided the same marked abundance and doubtless still more variety than were to be found in colonial times. Hotels in particular vied with one another in the wide range of choice offered their guests. Instead of having all the food placed on the table at once, as in colonial inns, the best hotels introduced service under the menu system, and along with this innovation might come attempts at a French cuisine. In all but a few places the American plan still prevailed. In the cities dinner commonly continued to be served around three in the afternoon and supper about seven in the evening.

Clothing. The most noticeable changes in the clothing of the people during this period, ending about 1860, were (1) the effects of the introduction of cheap cotton as a textile fiber and its displacement of most flax and not a few wool fabrics; (2) the effects of the reduced cost of textiles made in the new factories; (3) the beginning of the manufacture of

ready-made clothing, chiefly men's wear; (4) the shift in the fashion for men to simple and somber garb; (5) the much less obvious distinctions to be seen between the dress of the rich and that of those of moderate means or even those among the masses.

On the extreme frontier the dress of men still retained many features of the earlier days including a considerable use of leather but, along with that of the women, it was increasingly made up of cheap cotton or wool fabrics turned out by the factories of the East. From the middle thirties, there was a rapid decline in home production of all kinds of cloth and by the fifties what remained was negligible. With its passing cotton had generally displaced linen except for limited uses, chiefly among the upper class. Cotton flannel for underwear, except where the warmth of wool seemed essential, rapidly grew in popularity. The introduction of the circular knitting machine about this date also resulted in driving out another line of homemade products, especially hosiery. The advent, a little more than a decade later, of the sewing machine which could also be used in the home was chiefly employed in the factory for cheap cotton workingmen's clothing and overalls. After Goodyear's discovery of the process for vulcanizing rubber in 1839 such things as mackintoshes, suspenders, overshoes, and rubber boots became available. Though fabrics of silk were being reduced in cost, they still were a luxury item.

The change in the style and character of men's attire between 1775 and 1860, though far less striking in the lower than in the upper class, was rather remarkable, not only for its revolutionary character but also for the rapidity with which it took place, since the most important alterations had been made before 1830. The outstanding change was the replacing of the brilliantly colored silks, satins, and velvets together with the frills and braid by somber woolen cloth relieved only by the white of the frilled shirt showing above the low-cut waistcoat. Fine broadcloth was used for dress and coarser woollens for other purposes; in the thirties worsteds began to rise in favor. A brief return to a little color occurred in the brilliant velvet or cassimere waistcoats of the fifties. It was just after the turn of the century that the cut of men's suits began to assume its more modern form. Long trousers, at first rather close-fitting and later loose, began to replace knee breeches around 1812. For evening dress the swallow-tailed coat with low-cut vest and expanse of white shirt front came in. In daytime one making pretensions to be a man of affairs wore the long-tailed black cutaway or later the Prince Albert and with it a tall beaver hat or possibly the broad-brimmed black felt of the South. In summer flannel trousers or a suit of linen or of light nankeen might be worn. For the common man when not at work the short sack coat sufficed, while at his labors strong cotton jeans or a pair of overalls was donned. Until late in the period, when the modern collar and brighter ties first appeared, a stock,

usually with a narrow black tie, was worn about the neck. The trend towards democratic garb was also extended to treatment of the hair. Powder and curls disappeared first and in the twenties the queue was also vanishing. In the fifties moustaches, full beards, or whiskers with various trims rose to great popularity.

For the women of the upper class bright-colored fabrics of silk were still used for dress occasions. A close-fitting bodice or perhaps a sack was worn over a corset with a long silk skirt which, as the crinoline or hoop skirt and the Empress Eugénie styles came into fashion near the end of the period, attained enormous dimensions and was decorated with flounces, fringes, and lace. For less formal wear, dresses of fine muslin or cambric were available and much use was made of crepe or cashmere shawls. Bonnets, Leghorn hats with big flopping brims, and the more fashionable small flat hat in vogue in France were in fashion. The extravagance of the dress of a woman of fashion was a matter of frequent comment at the time; but the feature which would be most likely to cause comment today was the enormous amount of material required, an amount, including underclothing with its many petticoats or skirts, which has been estimated as six or seven times the yardage now customary.

For the vast majority of the womenfolk, however, no such extravagance was possible. Inexpensive grades of woolen and cotton fabrics, especially calicoes and ginghams, or even some of the old linsey-woolsey, had to serve most purposes and the garments were commonly made up in the house. Yet even among this group, a much larger proportion than formerly became the proud possessors of a silk dress carefully saved for special occasions. An English traveler writing in 1859 observed that "all classes were well dressed" and that workers after finishing their day's labor generally changed their garments and "were as neatly attired as those in higher stations." Although the distinction in the dress of women of different classes was more marked than in the case of men, it was much less sharp and obvious than in colonial times. Also the dress of the working classes was distinctly better than that of similar groups abroad.

A fairly typical yearly provision of clothing for the male slaves is said to have included: a suit of coarse wool or mixed wool and cotton for winter and two cotton suits or perhaps trousers and gingham shirts for summer, two pair of boots, three shirts, and a felt hat. The women received two dresses of striped cotton, three shifts, two pairs of shoes, and a knitted sack. House servants, of course, were better fitted out.

Medical Care and Public Health. In comparison with the following period the progress made at this time in providing proper medical care and protection of public health was very slight. Two score or more new medical schools had been opened by 1860, but the training provided even in the best was of course handicapped by the very limited medical knowl-

edge of the time; most students learned under the old apprenticeship system. After about 1835 states began to establish boards of medical examiners, which generally proved ineffective. The founding of the American Medical Association in 1847 was a landmark in the organized effort to promote better medical practice. A growth in knowledge and skill was indicated by the appearance of more specialized practitioners such as surgeons, dentists, opticians, and nurses, though systematic training schools for nursing had yet to appear.

The 1860 census indicated that for every 100,000 of population there were about 175 doctors and surgeons, 26 nurses, 18 dentists, and 1 optician—figures that show only too clearly that most of the people must have been dependent upon the general practitioner for all kinds of medical service. Far too frequently not even the doctor's advice was sought; people fell back on the traditional home remedies or used the patent medicines and various quack products that were sold in enormous quantities and with practically no legal hindrances at this period. Even the typical medical practice was such that in 1860 Oliver Wendell Holmes declared that "if the whole *materia medica*, *as now* used, could be sunk to the bottom of the sea it would be all the better for mankind—and all the worse for the fishes."

The number of hospitals mounted, but at a slow pace. As late as 1873 there were only 149 hospitals and allied institutions in the country, one third of these being for the insane. These hospitals provided space for some 35,000 beds or approximately one for each 1,150 of the population. Although supported by both governmental units and private philanthropy, they were primarily designed for, and used by, the poor; very few of the patients paid for the treatment received and typically all who could afford it were cared for in their home. In most hospitals there was little or no segregation of those suffering from special types of ailment such as infectious disease or mental trouble, but small groups of more specialized institutions, in addition to the insane asylums and pesthouses, had made their appearance. Lying-in hospitals existed in the larger cities; a very few had eye and ear hospitals; and there were also a number of institutions for the care of the deaf, dumb, and blind. Out-patient departments were often maintained for the poor and from the turn of the century dispensaries for their aid were to be found in the larger cities. The discovery of anesthetics, first used in a hospital in 1848, marked the beginning of a new era in the relief of human pain.

Hampered by the scanty knowledge as to the causes of disease and by the inertia that failed to make full use even of that which was at hand, progress in the protection of public health was also slight. In fact it is generally held that the modern public health movement with its emphasis on prevention of disease did not really get started, either here or abroad,

until the last of the fifties. The first public health organization of national scope was formed in 1857. From the first of the century the larger cities began to establish something like boards of health but their activities were likely to be very limited in scope and their actual authority even more so. The first state board of health was created in Massachusetts, but not till 1869. Most places made some progress in the handling of garbage, keeping the streets a little cleaner and more sanitary, and in strengthening the regulations concerning the sale of food and the local markets. Some cities secured a public water system and some a sewerage system serving at least a portion of their area; but what is said to have been the first really comprehensive system was adopted in Chicago just before 1860.

Efforts to combat the numerous epidemics that continued to sweep through the cities constituted one of the chief activities of the local health authorities. Vaccination against smallpox, which had started in 1798, was accepted very slowly and, with a minor exception, was not yet compulsory; but it had substantially reduced the prevalence of that disease. By the fifties epidemics of typhus fever were under fair control and those of cholera less frequent; even in the seventies yellow fever might carry off the inhabitants of a city by the thousands. The rather meager achievement of this period in medical history, in addition to such reduction of pain and misery as was secured, is best indicated by the fact that the expectation of life at birth (judged by Massachusetts figures) was increased only about 4 years between 1789 and 1855 and was just under 40 years at the latter date.

The Contribution of the State and of Philanthropy. This period was no exception to the trend toward the expansion of governmental activities which has been characteristic of the more highly organized nations for many centuries. It was least marked in the case of the Federal government, where it was checked by the dominance of the strict constructionist party. It was more in evidence in the states, though here, except for the internal improvements, it was largely of a regulatory character. It was most marked in the case of local government, though chiefly in the rising cities where both regulatory measures and those for supplying goods and services were rapidly expanded. The period is also marked by a very substantial growth of private gifts to support the activities of various types of religious, charitable, and cultural institutions.

Little need be said concerning the essential functions of government such as provision for national defense, maintenance of law and order, protection of personal and property rights, and care of the poor; they were carried out with fair efficiency according to the standards of the day. The frontiersman was still subject to scattered Indian attacks and the rapidity with which settlements sprang up in the West caused delay in the establishment of a properly functioning government. Favored by

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its growing political power and its geographic isolation, plus the achievements of the Monroe Doctrine, the nation was enabled to reduce the burden of defense to a minimum.

The construction and maintenance of roads were left entirely to the local units of government and as usual were apt to be stinted, though the building of wooden bridges over all but the large streams marked a distinct gain. The postal service was rapidly extended and much improved in quality and rates were greatly reduced. The former severity in the attitude toward crime and the treatment of criminals was much modified under the influence of the penal reformers. Especially important was the government's general assumption of the responsibility for providing free public schools; for secondary or more advanced training it did little and the facilities provided by religious and philanthropic institutions were the chief reliance. On the other hand, following the complete disestablishment of all churches the state had finally withdrawn from all religious functions, which were left to be supported by the various denominational organizations whose activities were strongly sectarian in character.

The increase in activities which was so marked in the large towns and cities was chiefly a product of growing necessity, but in part due to the rising spirit of democracy and humanitarianism. By 1860 some 68 public water-supply systems supplemented the slightly greater number of private systems that were to be found in the larger communities, the total number having been almost doubled during the decade. Sewerage systems, almost invariably inadequate, were practically confined to the large cities. Paved streets and sidewalks were more generally provided and were commonly lighted at night, by gas if available, otherwise by oil lanterns. By 1860 in two cities paid firemen had replaced the volunteers and steam fire engines, hydrants, and hose were replacing the fire-bucket line. A fairly adequate police force provided better security for life and property. Municipal markets were common, even if their control and the regulations governing the sale of food still left much to be desired.

There were some 48,000 small, common, or Sunday school libraries in the country in 1859 with around 8,000,000 volumes and between 2,000 and 3,000 other libraries with a total of about 4,300,000 volumes; but the latter were almost exclusively made up of college, scientific, and other institutional collections. The modern free public library with tax support had only just begun to appear. Some cities had created public parks but, except for the space thus provided, little was done to promote recreation. The Wadsworth Athenaeum of Hartford, Conn., opened in 1842, is said to have been the first building in the country devoted exclusively to art; public art museums were almost unknown in 1860. The Smithsonian Institution was organized in 1846.

The best summary measure of the rather meager contribution of government to the standard of living in 1860 is provided by the figures giving the per capita expenditures of that time. In the city of New York the outlay, including interest on the debt, was \$10.52 per capita, almost six times greater than in 1790 but only about one-eighteenth of what it was in 1935. In Boston the outlay in 1860 was nearly \$20 per capita. The expenditure of the Federal government for the fiscal year 1860, excluding debt retirement, was \$3.74 per capita; the total outlay of state and local governments has been estimated at around \$3.00 per capita. The total per capita for all units of government was around one-fifteenth of what it had become by 1936.

The existence of one church for every 580 inhabitants of the country in 1860 would indicate that, with the exception of some less populous sections, the general provision for religious services was rather ample, even if it did not meet the wants of all the numerous sects that had sprung into being by this time. The Sunday school was a flourishing institution in those days, as well as the home and foreign mission society and, for many, the church served as an important social center. Even to suggest the wide range of services provided by the innumerable charitable and social-service organizations of the time would be impossible here. They represented a sacrifice, both of money and of personal service, which in the aggregate must have constituted a substantial contribution to human welfare.

As fortunes grew in size, philanthropic gifts for various purposes increased both in frequency and amount. Much the largest giver of whom we know before 1860 was Stephen Girard who in 1831 left property worth nearly \$7 million for public benefactions, most of it going to Girard College. Educational purposes seem to have attracted the largest gifts and were prominent in the list of donations for public purposes made by George Peabody, notably those for the Southern Education Fund, which by the time of his death in 1869 amounted to \$3 million and brought the total of his public gifts to nearly \$9 million, a record up to that date. Peter Cooper put \$660,000 into the Cooper Union; Matthew Vassar founded the college of his name with a gift of \$400,000; an equal sum from John Jacob Astor in 1848 provided for the Astor Library. Notable, because of the rarity of gifts in its field, was the bequest by William Corcoran of his art collection and a building fund, though the resulting Gallery in Washington was not opened till 1874.

Leisure Time and Facilities for Its Use. The gain made in the amount of leisure time which people secured about 1860 appears to have been extremely moderate. On the farms, where most of the people still labored, from sunrise to sunset probably remained the usual working day with a little relief in winter. In the cities some of the stronger crafts had secured

a 10-hour day, but most city workers had longer hours; the same was true of those in factories. Very close to 70 hours a week was probably fairly typical. General holidays had not increased except for the Fourth of July and, whereas vacations had become more frequent among the upper class, there is little evidence of such a gain among the masses.

Over the years of life the chief gain was made in postponing the age when full-time work began. In most cases this was due to prolonging the period of education, but it is obvious from the short period of schooling then typical that for the vast majority this could not have been great. Once started, the struggle to earn a living was likely to be continued till disability or death overtook one, for even among the rich few thought of retiring. It could still be said that with a few exceptions, chiefly among the planter families, there was neither a leisure class nor any class that had much leisure.

By 1860 the facilities available for the use of leisure time were much more varied than in 1775 and also somewhat more generally accessible. This was chiefly due to the far greater commercial organization of the activities catering to the various pursuits of leisure time, not only to the more cultural but to the less serious as well. The fact that it now paid private business to undertake provision for so many of these wants indicates the greater amount of wealth as well as the greater amount of time now available for such purposes, especially in the large communities.

Of the facilities available for the more cultural pursuits those for schooling have previously been noted. They are best summed up in the facts that the average American about 1860 was getting only about 434 days of schooling in the course of his life and even in 1870 a fifth of the population was illiterate. As far as the availability of reading matter could satisfy the general thirst for knowledge, so often noted by foreign travelers, the situation had vastly improved. The library facilities already mentioned, though still very limited, meant much and were supplemented by circulating libraries and small book clubs.

More important were the abundance and cheapness of printed matter. Daily newspapers sold for 1 or 2 cents a copy and their average total circulation in 1860 was about 1,500,000 copies. In addition there were nearly 3,400 weeklies, monthlies, and quarterlies catering to a considerable range of tastes. Book publishing had become an important industry and it was estimated that in 1856 some \$16 million worth of American books was sold and \$1 million of foreign origin, though the widespread piracy of the works of foreign authors lessened the need for importation, to say nothing of reducing costs. Anthony Trollope in 1860 could write of Americans that "as consumers of literature they are certainly the most conspicuous people on earth. Where an English publisher contents himself with thousands of copies an American publisher deals with ten thou-

sands." Lectures were at about the height of their popularity at this period and men eminent in literature or science, both native and foreign, made extensive tours. Theatrical performances could be found in abundance in most cities, with admission charges from 25 cents up, and troupes toured through more moderate-sized communities. Although performances of a high character were given, the tendency was to appeal to the masses, and the vaudeville, variety show, magician, and Negro minstrels were extremely common. Foreign troupes provided a short season of grand opera in a few cities with admission from 25 cents to \$1.50; singers like Jenny Lind or Adelina Patti could be heard in concerts; local organizations in some cities afforded orchestral, chamber, and choral music. The circus, not without its educational features, was making its annual round from the thirties on and Barnum's had started its famous career. A very few individuals had begun to collect objects of art but the real growth of public museums was to come later.

Travel for pleasure and sight-seeing purposes was now relatively easy, quick, and inexpensive, the railroad rates varying from 3 to 8 cents a mile, but was not much indulged in except for the frequent short excursions. Summer resorts such as Saratoga, Newport, or the Virginia Hot Springs had developed and were well patronized by those of means. Trips to Europe were becoming a little more frequent among the upper class, but usually had very specific educational objectives.

Among the less serious activities to which leisure time could be devoted practically all those of any importance in the earlier period still provided the chief forms of amusement. Horse racing, wrestling, and cockfighting were frowned upon in some places because of the betting connected with them. Athletic sports were beginning to receive more attention and among these baseball, started in 1839 (also dated in 1842), took the lead. Though not yet organized on a professional basis, intercity games were played and by 1858 there was a league of some twenty-five clubs, while the first intercollegiate game occurred the next year. Rowing contests between colleges had started a few years earlier and also football games. A great interest in fancy skating developed just before 1860, and the recent influx of Germans was responsible for the organization of a group of turnvereins.

Yet the resort to athletic activities in general seems to have been very limited. Writing at a later date of conditions about 1850 Henry Adams said, "Boston at that time offered few healthy resources for boys or men. . . . Sport as a pursuit was unknown." In 1858 Oliver Wendell Holmes said, "I am satisfied that such a set of black-coated, stiff-jointed, soft-musclcd, paste-complectioned youth as we can boast in our Atlantic cities never before sprang from loins of Anglo-Saxon lineage." For the young ladies sports of this character were not thought of, but they received

lessons in dancing, music, drawing, and china painting. Among the upper class, formal social calls were the order of the day. The men now had social clubs of their own as well as the fraternal orders which by this time had attained a considerable membership. Sewing circles, reading clubs, and church social affairs provided opportunities for gatherings of the ladies. In most communities the saloon had now displaced the tavern as a gathering place for drinkers and was still widely patronized, despite the wave of local option and prohibition laws which swept the Northern states after 1840, most of which proved ineffective or were repealed. In the rural sections the old type of social gatherings still prevailed with little change, but as population grew and roads improved the isolation was modified by more frequent gatherings at church functions or drives to the county seat.

The Cost of Living and Distribution of Wealth. Though we have considerably more scattered data concerning the cost of living and the distribution of wealth for the years just before the Civil War than for those before the Revolution, the lack of any comprehensive survey still makes any attempt at generalization uncertain. The Civil War wrought such marked changes in prices and wealth or income distribution that any data for the years after 1860 may not reflect what was typical of the years just before that date.

That the period as a whole was one which witnessed a rapid increase in the number and size of large fortunes is clear. The first millionaire emerged from the Revolutionary struggle and we can safely assume that the number of large fortunes was augmented at an unusually rapid rate between about 1795 and 1807. Not a few of those added in the speculative thirties disappeared in the crash that followed, but the decade of the golden fifties must have added many more. Much the largest fortune of which we know previous to 1860 was that of John Jacob Astor who left some \$20 million when he died in 1848. Nicholas Longworth is said to have left an estate of about \$13 million when he died in 1863. Previously the estate of about \$8 million left by Stephen Girard in 1831 appears to have been the largest. Around 1850 various contemporary estimators ranked 25 men in New York, 18 in Boston, and 9 in Philadelphia as millionaires; but very few of them were credited with over \$2 million. A few years later another estimate for New York listed 91. How many Southern planters would have ranked in this class we do not know, but probably very few. Perhaps the most reliable indication of the number of families in the South having considerable wealth is the 1860 census return of nearly 2,300 which owned 100 or more slaves.

Since they provide the only fairly comprehensive data obtainable, the income tax returns are important, despite the limitations arising from the Civil War changes, evasion, and the omission from taxable income of

various items, including dividends or interest received from banks, trust companies, savings institutions, insurance companies, and railroads, which were taxed at the source. For the fairly prosperous year 1870 there were some 276,000 returns of taxable incomes of \$1,000 or more. There were over 9,000 returns for incomes of over \$11,000; 44,700 for incomes from over \$3,000 to \$11,000; nearly 41,000 for incomes from over \$2,000 to \$3,000 and the remainder, two-thirds of the total, had taxable incomes of from \$1,000 to \$2,000. The average of total taxable income returned for the two years 1869-1870 was \$579 million which would give an average per return in 1870 of \$2,093. Whereas the striking thing is the small number of the population having enough taxable income to make a return, it is also most significant that these returns indicate a greater concentration of income than has prevailed in the country during the last quarter century.

The actual outlay for living expenses among the different economic groups at this period is something that has to be inferred from what we know of their incomes, supplemented by a few facts concerning the cost of food and shelter. Bearing in mind that most of the saving must have been done by the upper class, we may surmise that an outlay of much over \$10,000 was not common even among the rich, though doubtless it rose much higher in a few cases; the outlay of most who might be classed as rich probably fell between \$5,000 and \$10,000. Just where the dividing lines should be drawn is a matter of arbitrary choice about which there may be endless dispute, but the outlay of what may be thought of as the middle class probably included the range from \$800 to \$5,000 with a possible median around \$1,200 to \$1,500. With wages of common labor at \$1 to \$1.25 a day and of skilled labor at \$1.50 to \$2.25, we have more definite limits within which to estimate the outlay of the laboring class, which may be set at between \$200 and \$800. The wages of women were relatively low, in the East often \$3 to \$5 a week and for domestic servants \$6 to \$10 a month.

The cost of food and housing accommodation probably constituted from 70 to 90 per cent of the total outlay of the vast majority. At the best hotels board and lodging could be secured for \$2 to \$2.50 a day and at much lower rates by the month; at small hotels and country inns rates of \$1 to \$1.50 a day were common. In most city boardinghouses the rates ranged from \$2.50 to \$6 a week, though the best might charge up to \$12, and in smaller places they were much lower. Students in the academies and colleges might pay \$2 to \$5 a week. The poor could obtain such accommodations by the year at from \$50 to \$150. Despite the marked tendency towards commercial agriculture and the decline in the variety of products turned out in the rural household, it is probable that the cash outlay of the great majority of farmers was between \$50 and \$250 a year.

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THE STANDARD ABOUT 1930

Thanks to the great expansion of governmental and other statistical investigations we now have data sufficiently comprehensive in character to provide a much more accurate idea of the American standard of living in the present period than could be secured for the earlier periods. Although so much more information is available, there is somewhat less need for elaborating upon the subject since everybody knows the standard of his own economic group and at least something, though commonly not very much, of that of other groups. Few of the present generation, however, fully appreciate the remarkable changes that have taken place in the period since 1860. It will be the main purpose of the following account to make clear what the most important of these have been, for in no similar period of time has the advance made in the standard of living been so great or so widely diffused. Though some of the data given will relate to the years of depression, the intention is to portray conditions that may be considered typical of fairly normal times.

Housing. The chief change in the structure of dwellings during this period was largely a product of the shift of population from rural to urban centers and the growth of great cities. With the disappearance of the frontier the dwellings typical of it had also gone. Though the log cabin still lingered in sections of the South, the structures built by the most poverty-stricken, whether on farms or in city outskirts, were crude plank shanties. The frame house typical of farms, towns, and city outskirts had not greatly altered in its essential features. Commonly from one to two and a half stories high with from four to nine rooms it showed a trend toward greater compactness; rooms were smaller and ceilings one or two feet lower. Although the brick chimney remained, cement was commonly used for the foundation and other purposes and manufactured roofing material was driving out wooden shingles. Better insulation of walls and roof was introduced and an adjoining or near-by garage became usual.

In most cities of any size local fire protection ordinances now required construction of brick or other fireproof material. Here the houses of the great majority were two- or three-story brick structures stretching back on narrow lots to a small open space in the rear, often with one apartment for each story. The drive against the worst features of the tenement house, which got under way in New York in the sixties and slowly spread to other cities, greatly lessened these evils, though much still remains to be accomplished. As choice city residential sites rose in value, there was increased pressure to make more intensive use of them by erecting taller buildings, six to eight stories being about the maximum in 1860. This was made possible by the introduction of the elevator, first used for passenger purposes in 1859, and by resorting to steel frame construction, the beginning of which dates back to about 1890.

Out of this arose the modern skyscraper hotel, office, and apartment structures which attained such popularity in the building boom of the twenties. Whereas the luxurious apartment with its varied services and elimination of house ownership cares became the city dwelling of a growing proportion of the rich, others chose to build elaborate mansions of their own, the cost of which might run into several millions. Increasingly one dwelling was not regarded as sufficient and might be supplemented by a near-by country estate or more distant summer and winter homes. Even among the middle class a summer home, ranging in character from a camp cabin to a cottage or an abandoned farm and located in an attractive natural environment, became fairly common.

Fortunately available statistics provide a fairly clear idea of the general situation. In 1930 about a fifth of the homes were on farms, another fifth was rural nonfarm, and the remainder urban. Three out of every four families lived in single-family houses, though in urban areas the proportion fell to 63 per cent with 16 per cent more living in two-family structures. The houses occupied by their owners had a median value of \$5,743 in urban regions and of \$3,661 in rural regions, figures obviously very much higher than would have been found in 1860. A trifle over half the families lived in rented houses. Though this was a bit below the figure for 1890, it must have been far above that for 1860. The decline in home ownership was one of the striking developments of this period and, not being by any means confined to the poorer classes, must be attributed in part to a decreased desire for such ownership.

A very comprehensive survey of urban housing in 1934 showed that almost 84 per cent of the single-family structures were of wood, nearly 9 per cent of brick, and 6 per cent of stucco; outside of the Northeast over half were one story high. Of the owner-occupied single-family houses less than 12 per cent were valued at over \$7,500; 24 per cent at under \$2,000; almost 30 per cent were worth from \$3,000 to \$5,000. Of the urban homes that were rented, over half rented for less than \$20 a month, a quarter at from \$20 up to \$29.99, and about 4 per cent for \$50 and up. Although there was some crowding, over half the urban homes had five or six rooms. Less than 2 per cent were considered unfit to live in, though over a sixth needed major repairs.

House Furnishing and Equipment. As during the preceding period, the greatest contributions toward improved housing conditions at this time may be said to have been due to better equipment and furnishings and their more general diffusion, at least among urban dwellings, since those in rural regions failed to share in much of this gain. For heating, stoves continued to be extensively used, especially among the poor or in the milder climates and in rural regions generally. Even in urban dwellings 42 per cent still depended on stoves according to the survey of 1934 but

over half had a central heating system, which was one of the greatest gains of the period in housing. The essential character of the central heating systems used—hot air, hot water, or steam—was the same as before 1860, but there was a great increase in efficiency and ease of operation. The adoption of new fuels, such as oil or gas, and automatic devices for control greatly reduced the cares of the householder. Though the high cost limited its use to a very small group the introduction of air conditioning marked the beginning of another step in advance.

Especially important from the point of view of both health and comfort was the greatly increased use of modern plumbing; its rather general dependence upon water and sewerage systems meant that this was largely, though not exclusively, confined to urban homes. The advent of electricity and its rapid spread through urban areas from the eighties on brought to the home not only light but also power and heat. For lighting, where available, it rapidly displaced gas and the bothersome kerosene lamp; as power it drove the washing machine, the vacuum cleaner, the sewing machine, the dishwasher, or the refrigerator with infinite saving in household toil, and it supplied heat for numerous gadgets from the flatiron, toaster, and room heater to the curling iron. Though gas lost out in the lighting field, it did, aided by the abundant natural gas output and pipe lines, secure a dominant position in cooking and a growing use for several other household needs. The expense involved in installing this new equipment for heating, plumbing, and lighting was no small factor in the increased cost of dwellings.

Surveys made about 1935 were sufficiently comprehensive to provide a good picture of what had actually been achieved along these lines. Excluding hotels, lodging, and rooming houses, these showed that in urban owner-occupied dwellings 95 per cent had electric light, 87 per cent indoor water closets, 84 per cent baths, 73 per cent gas for cooking, 50 per cent central heating, 21 per cent mechanical refrigeration, and 5 per cent electric cooking. In rented dwellings these percentages were somewhat lower. If we turn to farm dwellings, the picture is a very different one for there only 30 per cent had water supplied to the house, only 7 per cent had electricity, only 11 per cent had a bathtub, and only 8 per cent an indoor flush toilet. The survey came to the conclusion that about one-third of the nonfarm houses and two-thirds of the farm houses should be considered as sub-standard, the total making up approximately a third of all family dwellings.

If we turn to housefurnishings, we find that the changes wrought during this period, even if outwardly striking, were of far less human significance. Perhaps the most important was the tendency to make the rooms more livable and the furniture more comfortable and to secure a much more general dispersion of these benefits among the masses. Up-

holstered furniture was much more widely used and beds made easier. The significantly named "living room" replaced the stiff, dark parlor; color tones became much lighter; and increasingly sunlight was sought rather than excluded. Hardwood floors covered with rugs or easily removable carpeting came into favor and were employed in most rooms while tile and linoleum might be adopted in bathroom and kitchen. On the table attractive but inexpensive china and glassware replaced the coarse heavy products of former days. Pianos became a much more common possession, nearly 6 million being in use by 1938, phonographs were numerous, and the radio jumped into widespread use almost overnight. A kitchen with modern equipment would seem a veritable earthly paradise to the housewife of olden days.

Food and Drink. As far as food was concerned the chief gains made during this period arose not so much from any increase in general abundance as from the greater variety obtainable throughout the year, the great improvement in diet as a result of the study of nutrition, and the ever widening use of the knowledge thus provided. Greater variety was secured chiefly by cheaper and improved means of transportation and by the introduction of better means for the preservation of food. The rise of the manufacture of artificial ice, starting early in the period, and its final extension into the house toward the last of the period were important landmarks in this advance. Refrigeration for long-distance transport, both by land and by sea, starting in the seventies, was another. A third was the advance made in other means for preserving food, especially in the canning industry. That industry had received its first marked impetus from the needs of the Civil War and thereafter expanded at a rapid rate, aided by the study of food chemistry and the great reduction in the cost of tin and glass containers. Soon an endless variety of food products was made available in this convenient form. A study made in 1917 indicated that a quarter of the expenditures for vegetables and a fifth of those for fruits were for canned products. Meanwhile refrigerated transport was making fresh meat, fish, vegetables, and fruit more generally available through most, if not all, seasons of the year.

The content and other characteristics of the meals eaten were also changed by various developments, such as the decreased proportion of purely physical work that was done and the increased proportion of those living in urban regions. Though most of the meat consumed was now fresh, its use per capita showed a decided decline in recent decades, being estimated at 124 pounds in 1938 or about a quarter below that of 1908. The consumption of lamb was still very small, about 7 pounds per capita, and that of veal only a trifle higher; the remainder, being divided almost equally between pork and beef, shows a marked growth in the use of beef. The consumption of fish has been estimated at 13 pounds per

capita. Recent figures also indicate a decreased use of cereal products as well as a substantial increase in that of vegetables and fruits. As compared with the first of the period there seems to have been an appreciable growth in the consumption of poultry and dairy products, and cheap substitutes for butter are also obtainable. Particularly striking has been the rapidly mounting use of sugar, the per capita figure for all forms of its use being more than 100 pounds, or over three times that in 1860; the consumption of coffee, which rose to about 13 pounds per capita, doubled. The use of tea—less than 1 pound per capita—showed little change but that of cocoa or chocolate in various forms rose rapidly.

The persistent temperance agitation brought some decline in excessive drinking, though in 1940 the per capita consumption of alcoholic beverages was estimated at almost 14 gallons and the per capita annual outlay therefor at \$25, the total being \$3.3 billion. It is significant that this total ranks with the total outlay, both public and private, for medical care or that for education. Among alcoholic beverages malt liquors, chiefly beer, became by far the most widely used, and whisky remained the favorite among hard liquors. Manufactured nonalcoholic beverages attained an enormous sale. Increasing governmental regulation did much to check the worst evils in the adulteration or the sale of deleterious foods and drinks.

Altered conditions of work and living also wrought other changes in meals, though chiefly in urban sections. Except for those doing hard physical work, breakfast became a much lighter meal from which meat, other than a bit of bacon, was apt to disappear. The heavy meal of the day was shifted to the evening and a midday luncheon took its place. This also tended to become relatively light: for many a hurried sandwich and drink at a lunch counter, for laborers what they brought from home in a lunch pail; for the upper class as well it was likely to be a moderate selection of light foods. The evening dinner after work was over became the substantial meal of the day for most urban dwellers; this also, especially among those of means and for formal banquets, was likely to be simpler and lighter, though more appetizing, than formerly.

In cities, too, with the growing tendency of people to reduce home duties there was a decided growth in the number that secured most of their meals at outside restaurants. Despite the gains made it was claimed in 1940 that about a third of the population was not getting the kind and amount of food necessary for strength and health. This is attributable chiefly to lack of means to purchase the requisite amount of dairy products, fruit, and vegetables, but also to uneconomical buying, lack of intelligent dietary planning, and poor preparation of meals.

Clothing. As the clothing commonly worn by the various economic groups today is sufficiently familiar to most to obviate any need for much

description here, only the more significant changes since 1860 will be noted. One of the most striking was the enormous increase in the use of silk fabrics among the great masses, only partly owing to the substantial reduction in their cost. Another change was the rapid growth in the proportion of the clothing that was bought ready-made—a shift particularly marked in the case of women's wear and by no means confined to the purchases of the lower class. In the case of women the yardage of fabrics required for their apparel was but a small fraction of what it had been in 1860, a change of substantial importance in reducing its cost. This gain was somewhat offset by the more frequent purchase of new dresses as the tendency to follow the changing fashions became common among the working classes. In this connection, too, may be noted the great growth in the various services provided by the beauty parlor and the extensive use thereof by nearly all classes of urban women.

The result of these changes was an almost complete disappearance of the more obvious and striking distinctions between the dress of the different classes which had been so marked in former times, especially in the colonial period. Differences in the quality of goods, excellence of fit, and refinements of style of course remained and the wardrobe of the well to do was far more varied and extensive than that of the masses, yet without close observation the street garb of a young man or woman dependent upon a very moderate wage might appear very similar to that of scions of the wealthy families. Though much less marked, such changes were also in evidence in the rural region.

Medical Care and Public Health. In the field of medical care this period brought a phenomenal advance. It may well be claimed to have been greater than had been attained in all previous history; certainly it was one of the most important gains, if not the most important, made in raising the standard of living. Fundamentally, this gain was the combined product of scientific advance and growing wealth, for wealth was given for the support of medical research as never before and it required a very large sum to provide the medical care involved in putting this scientific knowledge into general use. The discoveries of Pasteur and the subsequent development of bacteriology were revolutionary in their effects, since, by establishing the causes of various diseases and leading to the development of better methods of treatment, it was possible to attack disease at its source and check its spread. One after another, leprosy, tuberculosis, yellow fever, cholera, smallpox, diphtheria, malaria, hookworm, and syphilis were thus put under more effective control.

The work of Lister and others in the prevention of infection, along with the discovery of safer and more efficient anesthetics, helped to cut the fatalities in major operations from 50 to 60 per cent to between 5 and 10 per cent. Among many other gains those in dentistry and the treatment

of mental and nervous diseases may be mentioned. Medical schools improved correspondingly and took over the training of doctors in cooperation with hospital clinics. From about 1875 the states began to enforce higher standards and by the first of the twentieth century a marked improvement had been secured. Regular hospital training for nurses started in 1873 and was rapidly extended. By 1929 there was one doctor for every 780 people in the population, or about twice the proportion in the chief countries of western Europe, and specialists were more widely available than ever.

The effect of these developments on the quality of hospital care needs no elaboration, but the growth of hospitals and the services they rendered was also important. By 1935 there were over 6,200 hospitals on the list of the American Medical Association with a total of more than 1,100,000 beds, or about 9 per 1,000 of population as contrasted with less than 1 per 1,000 in 1870. They represented an investment of some \$3 billion and involved an annual operating outlay of \$750 million. In 1937, the hospitals rendered over 9 million patients 350 million days' care, almost equal to three days per capita for the whole country. In addition over 2,400 hospitals maintained outpatient and clinic departments. After the middle seventies there came a complete reversal of the former attitude that hospitals were only for the poor and all classes welcomed the chance to avail themselves of their services. Recently 45 per cent of their operating cost was met by patients' fees, 47 per cent by taxes, and the rest by endowment and other sources.

The total consumer outlay for medical care of all kinds, about 1935, was estimated at \$2.2 billion, in addition to which government and private institutions spent some \$650 million, making the total per capita outlay \$23. This is below the minimum cost for adequate care when purchased on a group basis, a plan that seems to offer much for the future but is available to but few at present. One estimate places the cost of proper care at around \$75 per capita or more than three times the present outlay. Despite the great gains so recently made, it is obvious that this field offers one of the great openings for future improvement.

Growing scientific knowledge as to how to achieve its objectives as well as an awakening consciousness concerning existing evils gave a marked impetus to the public health and hygiene movement which was only just getting a start in 1860. The investigation of tenement conditions resulted in the establishment of a health department in New York in 1866. Chicago followed suit the next year and by 1873 thirty-two cities were so equipped. The first state board of health was founded by Massachusetts in 1869 and by 1886 thirty-six other states had acted similarly. Today all states have one. In 1872 the American Public Health Association was formed and in 1912 the United States Public Health Service, the

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activities of which have since been greatly expanded. After the seventies, when numerous serious outbreaks occurred, the ravages of the old plagues practically ceased. Increasingly the emphasis in the activities of health officials was shifted from quarantine and alleviative measures to sanitation, safeguarding of food, and a wide range of other preventive regulations.

Although the contribution toward a higher standard of living as a result of better medical care and public health activities cannot be measured in its relief of human suffering and misery, it must have been very great. That which took the form of the prolongation of human life is susceptible of measurement and provides the surest proof of the remarkable achievements of the period in this field of effort. In 1860 the expectation of life at birth was about 40 years. The gain up to the close of the century, when the figure had risen to 45 years, was relatively moderate; thereafter, the cumulative effects of many improvements brought a remarkable advance until the child born today can, on the average, look forward to a life extending over 60 years. The increase during this period in the expectancy of life of over 20 years, or about 50 per cent, far exceeds in rate anything in previous history. Obviously there can be no reasonable expectation of anything like it in the future.

The Contribution of the State and of Philanthropy. Spurred on by the spread of the humanitarian and democratic spirit, forced on by the many problems created by rapid changes in an increasingly complex and interdependent economic order, and aided by greater urban concentration of population and the growth of wealth, this period brought a rapid expansion of governmental activities of all sorts as well as a notable increase in the activities supported by private philanthropy. Since most of the important governmental activities, whether in the form of regulation or provision of goods and services, have been noted in previous chapters, a summary of the main developments, chiefly significant for their contribution to the standard of living during the period, will suffice at this point.

In so far as the Federal government expanded the scope of its activities beyond the functions previously recognized as essential, it was chiefly to provide additional financial aid to undertakings inadequately provided for by state and local governments, and this was facilitated by the steady decline of the opposition based on a strict construction of the Constitution. Limiting the list to goods or services provided that were important for consumption purposes, we may note those for highways, education, recreation, health, child welfare, and, more recently, social security and relief. The expansion of state activities in this field, tending in the main to supplement what was done by local authorities, took much the same direction. Highway construction, education, notably in the case of the

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state universities, high schools, and normal schools, public health, including care of the insane, and, of late, relief, were prominent among the things provided for.

As in the preceding period, however, it was among the local units of government and chiefly in the large cities that the greatest growth of such activities occurred. The facilities for free education were expanded to include high school, night school, vocational schools, and sometimes college. Streets were improved, better lighted and cleaned and their traffic controlled, and garbage removal was common. Public water and sewerage systems were built and not infrequently an electric-light and power plant. The growing public provision for care of the sick and protection of health, already noted, was supplemented by a great extension of the facilities for recreation and amusement. Public support of libraries became common and in the large cities was sometimes extended to art museums and music.

Since the increase in this outlay for tax-supported activities was very largely a product of the growing outlay for goods and services contributing to consumers' needs and since only a small portion was employed for other purposes, the rise in the per capita governmental expenditures or in the taxes collected will serve to convey a somewhat more definite conception of the general development in this field during the period. Thus in New York City the per capita expenditure of \$189 in 1935 was about eighteen times that in 1860. In 1940 Federal, state, and local taxes amounted to about \$109 per capita or nearly sixteen times the estimated figure in 1860. In the most recent years total taxes have mounted to the point where they absorb around a fifth of the national income and the added outlay based on borrowed funds would increase the total to nearly a quarter. Thus the character of governmental activities and expenditures has been made an important factor in the current standard of living.

Moreover, a major feature of that importance is the effect of the combined action of the system of taxation and the forms of expenditure in determining what groups pay for, and what groups receive the benefit of, the resulting contribution to the standard of living. To the extent that the taxing system has been progressive in character it has served to raise the standard of living of the masses while the growing outlay of governmental units has tended to ensure the use of a larger portion of the national income for purposes deemed especially important in promoting social welfare.

A similar result has followed from the remarkable increase in the number and the size of private gifts for public purposes that developed during this period. With the growth in the size of private fortunes, gifts by single individuals totaling \$100 million and upward became more frequent than those of \$500,000 or more had been before 1860. The

known total of public gifts made by John D. Rockefeller was over \$530 million and those of Andrew Carnegie were \$350 million. The practice of establishing foundations, which may be said to have been started by George Peabody in 1867, became more common in the twentieth century and over 300 are known to exist; 243 have a capital fund of over \$1.2 billion.

The community chest plan, first started in Cleveland in 1913, has proved a particularly successful means for gathering contributions from a large number of people as well as for securing a better coordinated distribution of their use. Nearly 500 of these organizations existed in 1938 when \$83 million was given by some 9 million contributors. Local charity organization societies have also become a medium through which many subscribers provide discriminating assistance to those in distress. The main purposes for which these philanthropic gifts have been used are education, health, charities, libraries, scientific research, and promotion of the arts. Gifts to religious institutions were also numerous and the churches, although continuing their customary services, showed a marked tendency in their activities to put less stress on sectarianism and more on social welfare. The recent tendency among some sects to combine promotes a more efficient use of their resources.

Leisure Time and the Facilities for Its Use. Probably to be ranked next in importance, if not often more important than better medical care as a contribution to the standard of living during this period, was the great increase in leisure time. By 1930 something like 20 hours a week had been added to the leisure time of the average man as compared with the situation in 1860. Although this was almost the equivalent of two days of labor in 1860, the intensity of work in many occupations had become much greater. By 1940, following the depression, an addition to this leisure time, probably ranging from three to ten hours a week in the more important occupations affected, had been added. Doubtless some of this recent gain will prove permanent, but just how much remains to be seen. Another addition has been obtained by the increase in the number of legal holidays and by the growth among the upper class in the habit of taking vacations and of the custom of granting vacations of a week or two to an increasing proportion among the mass of the workers. Another and much more important addition has come through the reduction in the proportion of the years of life which was devoted to work. With the prolongation of the period of education the average child did not begin full-time work till he was between sixteen and eighteen years of age; for a growing number this period was substantially prolonged. Finally, as retirement before death became more common, leisure was procured for the last of life. The recent social security legislation enormously increases the number that will be financially able to retire.

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The total of all these additions to leisure time represented a remarkable achievement. It also greatly accentuated the problem as to the best use of that time and the need for facilities for such use. The common assertion that Americans have so exclusively devoted themselves to money getting that they do not know how to use their money or their leisure intelligently when they have got them, though far less true today than formerly, still finds far too much justification.

That such a growth of leisure time, when accompanied by an increase in the per capita national income, should result in a marked expansion of the facilities provided for the use of leisure time was to be expected; as was also the tendency toward the commercial organization of those engaged in providing such facilities, especially the facilities used in the less cultural leisure time pursuits. For the more cultural pursuits there was less effective economic demand but much more frequent provision by the state or by private philanthropy.

Among the facilities provided for the more cultural leisure time activities, those for education have previously been noted. The use made of them is best summarized in the fact that the average American is now getting about 1,600 days of schooling or nearly four times as much as in 1860. The resulting reduction in illiteracy from 20 per cent in 1870 to 4 per cent in 1930 meant a marked gain for those able to profit by the increased facilities for reading. Around 1935 there were over 6,200 public libraries in the country, where, it was estimated, about 1 in 5 of the population was a registered borrower. Their total circulation was some 450 million and the operating expenses 37 cents per capita. Even then, however, 37 per cent of the population, almost all in rural regions, was said to be without library facilities. Meanwhile the formation of a private library became an increasingly common hobby among those in the upper and middle classes. Reading matter in the form of newspapers, magazines, and books has been put out in a steadily rising volume. It has been estimated that newspapers reach 90 per cent of the reading population and magazines 45 per cent. The total consumer outlay for all forms of reading material in 1935-1936 was figured at \$550 million.

Lectures, if somewhat less popular than formerly, are still extensively attended. The theater has lost some ground, especially among the masses, before the astounding rise of the motion-picture industry which attracts over 85 million admissions a week and provides regular entertainment to the smaller communities that never had any before. Permanent opera organizations with the world's best talent are maintained in two or three cities and appear elsewhere on tours. Several of the large cities support symphony orchestras and musical recitals are more frequent than ever.

The rise of the modern public art museum may be said to date from 1870 when both New York and Boston took the step of organization.

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Growth was slow, being dependent largely upon private support, but today a score or two of fairly comprehensive museums are in existence and less pretentious collections may be found in over a hundred cities of moderate size. At the same time private collectors multiplied; some men of wealth accumulated magnificent collections, many of which ultimately were made available to the public in one form or another, while a growing number among those of moderate means found joy in the most modest assemblage. By 1930 there were also over 400 historical museums and 150 devoted to science or industry. In fact the combination of increased leisure and larger means proved a great stimulus to the collecting spirit which found an outlet in all sorts of hobbies from antiques to postage stamps.

In the field of communication and transportation two of the developments destined to exert some of the most important reactions on the use of leisure time took place. They were particularly significant, moreover, because in the case of both the radio and the automobile their advantages were available to the large group living in rural regions, as was not the case with many of the other innovations of the period. The variety of the programs commonly provided on the radio was another advantage and there was also the possibility of combining its use with other activities, notably work about the home. By 1940 some 45 million radio receiving sets were supposed to be in operation and certainly few of the pursuits of leisure were accorded more time.

The automobile had the advantage of being usable for both work and pleasure and its rapid spread during the last quarter century can be attributed to the fact that for many it was more of a necessity than a luxury. Although there is about one automobile for every four and a half people in the country, it was estimated that in 1937 54 per cent of the families owned cars and nearly 3 per cent had two or more. That ownership is widely spread among the masses is indicated by the fact that 90 per cent of the cars are believed to be owned by families with less than \$3,000 a year income and a third by those getting less than \$20 a week.

The average annual expenditure per family on autos in 1935-1936 was estimated at \$114. What proportion of this should be attributed to leisure time use we cannot determine but it has been estimated as at least one quarter. For 1930 the total outlay of the country on motor cars for both touring and short daily pleasure trips is supposed to have been about \$1.9 billion. The auto has made travel for pleasure available to the masses as never before. The total outlay for pleasure travel of all kinds has come to be much the largest of the items devoted to distinctly recreational purposes, making up in 1930 \$6.5 billion of the total of \$10.2 billion so spent. Though travel abroad became far more common during this

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period, it was still practically confined to the wealthy and a small fraction of the middle class.

Among the developments affecting the less serious uses of leisure time, one of the most striking of this period was the growth of interest in physical recreation and sports. This was in part a product of the public health movement as well as of the greater need when physical exertion became a less common feature of daily work and the nervous strain increased; it was also due to far better provision under both public and private auspices of the requisite facilities, not to mention the increased time and wealth available for the purpose.

The organization of sports, beginning in the schools, was continued in the colleges; then private clubs or business enterprise undertook to provide facilities for those who as active participants or merely spectators retained their interest in sports in later years. Increasingly local communities provided parks, playgrounds, and beaches and expanded their facilities; state and Federal parks became common. Governmental units spent nearly \$200 million for such purposes in 1930. In addition to the facilities for indoor exercise provided by private clubs, the Y.M.C.A., and the turnverein, outdoor sport was made available at the country clubs which spread so rapidly after the turn of the century, stimulated by the increasing interest in golf. By 1930 there were nearly 6,000 golf courses in the country, roughly one-fifth being public or fee courses. About the same time nearly a thousand tennis clubs belonged to the national association, while courts were to be found in nearly every town.

Meanwhile the commercial organization of sports and sporting events advanced rapidly. The lead here was taken in baseball, which by the early seventies was said to have become the great American sport. The first professional team was formed in Cincinnati in 1869. Its successful tour at once led to the organization of others and a national association in 1871. Though many other sports originally amateur have developed a professional branch, such as bicycling, skating or, more recently, football, hockey, and tennis, baseball has easily maintained its marked preeminence in popular favor. Since the first World War boxing has been viewed with more favor than formerly. Commercial provision for billiards, pool, and bowling is widely available and is entering the field of skiing which has recently risen to much favor as a winter sport.

Among other leisure time diversions dancing and card playing seem to have become more widespread than ever. Night clubs and cabarets became a prominent feature in the night life of the cities; after the repeal of prohibition and the disappearance of the speak-easy the saloon generally returned to its former haunts, though commonly under a different name and with a little more effort to put on an appearance of respect-

ability. Probably the multiplicity of other diversions that had become available made its function as a social center for laboring men less important. In rural sections, as access to a neighboring town or city became easier, the frequency of social gatherings decreased; in social circles elsewhere the practice of making formal calls waned and entertainment generally assumed a more informal character. Little serious effort was made anywhere to stamp out the resorts of vice, and gambling and betting remained widespread. Though the Federal government tried to stamp out lotteries, it had met with but moderate success and what appears to have been a more tolerant public attitude toward betting led to its legalization in connection with horse racing in some states.

The Cost of Living and Distribution of Wealth and Income. Though we can be certain that the period from 1860 down to 1930 witnessed the growth of fortunes that were both far more numerous and very much larger than ever before, it is not until we begin to get the income tax returns, which started in 1914, that we have any comprehensive data concerning the distribution of incomes; our knowledge of the distribution of wealth has in the main to be inferred from that. A few scattered estimates give a hint of the largest fortunes that were developing in the intervening years. The first to exceed the \$100 million mark of which we know was that of Commodore Vanderbilt who died in 1877. A list of reputed fortunes drawn up in 1889 places that of J. J. Astor at \$150 million and those of five more at \$100 million; 64 others with from \$20 million up are named and the list is admittedly incomplete. Another more comprehensive list published in 1892 named over 4,000 individuals believed to be worth at least \$1 million. In the twentieth century a new high peak was reached somewhere above \$500 million, but it is doubtful if this was ever attained in more than two cases. In more recent years the effects of the income, estate, and gift taxes, to say nothing of the depression, have greatly checked the accumulation of large new fortunes and also tended to bring about the dispersal of the older accumulations.

With the revival of the income tax, effective in 1914, we have comprehensive data on incomes, though it is of very limited use in indicating the size of the fortunes possessed by those reporting, since the amounts returned included salaries and profits or losses from the resale of property owned. The returns for 1914 indicated nearly 8,000 individuals with net incomes of \$50,000 or more. For the next decade the number ranged between 10,000 and 20,000 and the peak of 43,000 was reached in 1928. The figure fell to less than 6,000 in 1932 but by 1936 had recovered to nearly 14,000. Net incomes of \$1 million or more probably numbered around 60 in 1914 and during the next decade fluctuated between 20 and a little over 200, but then rose to the peak of 513 in 1929. By 1932 there were only 20 such returns, but by 1936 the number had risen to 61.

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Far more important, however, was the general distribution of income among all classes. We are now fortunate to have available figures that may

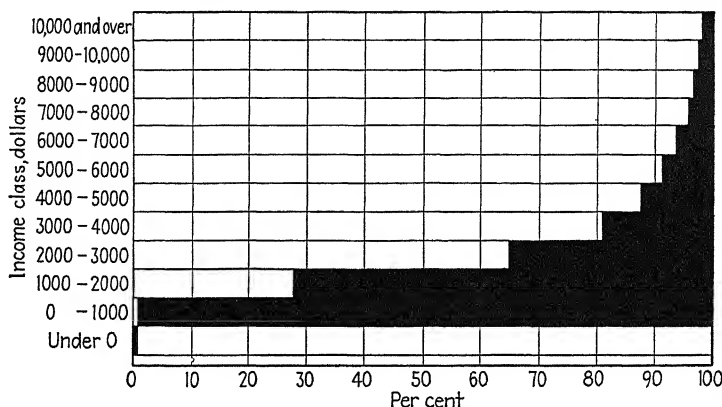


FIG. 87.—Distribution of income (in economic units) of families and unattached individuals by income classes, 1929. (Based on M. Leven, H. G. Moulton, and C. Warburton, "America's Capacity to Consume.")

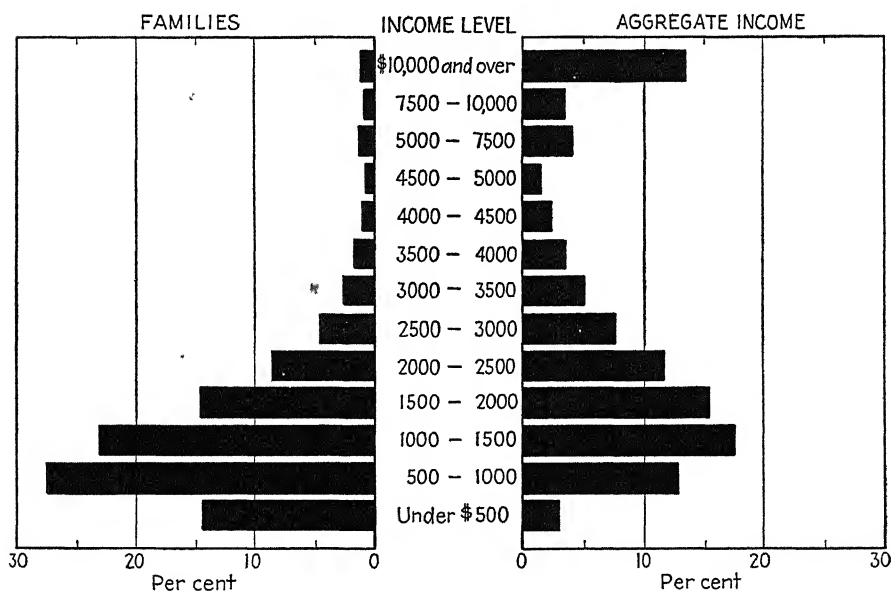


FIG. 88.—Distribution of family income in the United States by income level, 1935-1936. (National Resources Committee, "Consumer Incomes in the United States.")

be accepted as giving a fairly accurate approximation to the situation existing in recent years. Of the two accompanying charts the upper one, for 1929, shows the situation in a prosperous year and covers the incomes of unattached individuals as well as those of families. In both charts the

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estimated rental value of homes owned by the occupants and the value of supplies produced on farms where they are consumed are included as a part of the estimated incomes, as is obviously necessary to secure a fair view of the situation.

The chart for 1935-1936 (page 1053), when the effects of the depression were still in evidence, covers family incomes only because the family is

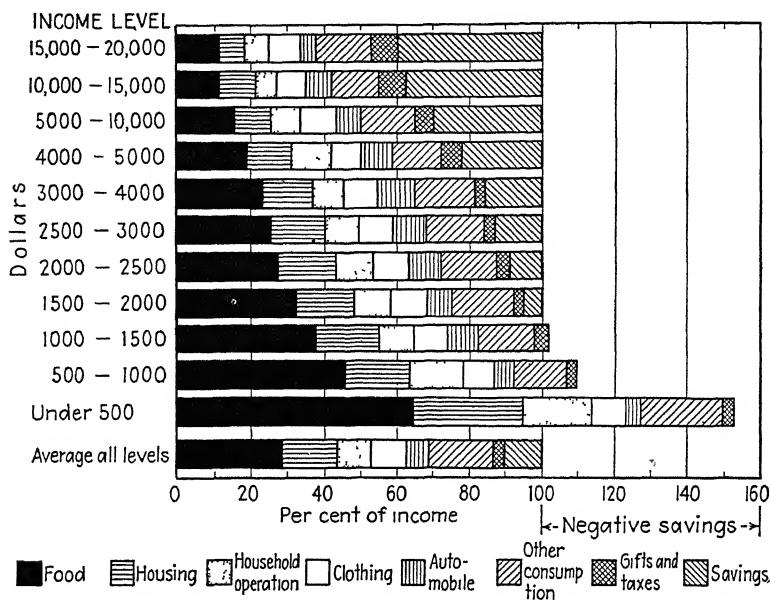


FIG. 89.—Percentage use of income by American families at different income levels, 1935-1936. (*National Resources Committee, "Consumer Expenditures in the United States."*)

the significant unit and the inclusion of the incomes of single individuals would tend to distort the picture for most purposes by raising the averages. This chart covers 29,400,300 families, or 91 per cent of all consumers, whose aggregate income was \$47.7 billion or four-fifths of total consumer income. The particularly significant points brought out by this chart should be noted. If the total income of all these families had been divided equally among them, each family would have received \$1,622 income; as it was, half the families received less than \$1,160. The lowest 40 per cent of the families had incomes below \$970 and received 15 per cent of the total income; the next 40 per cent had incomes between \$970 and \$2,050 and received 35 per cent of the total; the remaining 20 per cent with incomes above \$2,050 received 51 per cent of the total.

With this picture of the distribution of income in mind, we can now turn to see how it was used by the recipients and thus secure a general idea of the cost of living for different economic groups and the relative

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importance of the chief elements, as far as covered by this outlay, which entered into their standard of living. In the chart on page 1054 showing the percentage use of income up to the \$20,000 level by families in 1935-1936, it will be noted that in the lower income groups the outlay was typically in excess of the income and that practically all the saving, which rose to 40 per cent of the income in the top group, was done by those

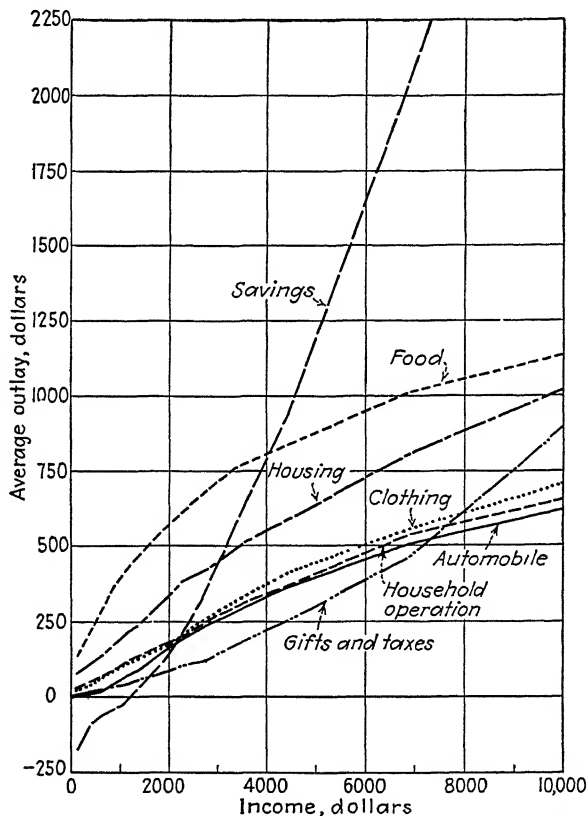


FIG. 90.—Average outlay of nation's consumer units for major categories of disbursement at different income levels, 1935-1936. (*National Resources Committee, "Consumer Expenditures in the United States."*)

in the upper income groups. The outlay for food, housing, and house operation averaged over half of the income for all groups; but the proportion used for these purposes rose from only a quarter in the case of the high income group to a point exceeding income in the case of the lowest group.

Just how much the average absolute outlay of different groups both family and individual was for the main forms of disbursement is shown in another chart on this page; a third chart (page 1056) is of importance as

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giving the aggregate disbursements of American consumers for each of the main categories and as making clear the relative importance of each in total consumer outlay. It may be noted that of the \$50 billion remaining for all consumption purposes, after deducting the disbursements for savings, gifts, and taxes, over one-half was used for food and housing alone and a tenth each for household operation and clothing so that less than three-tenths, or just over \$13 billion, was left available for all other forms of consumers' needs. A fourth chart (page 1057) shows how the average

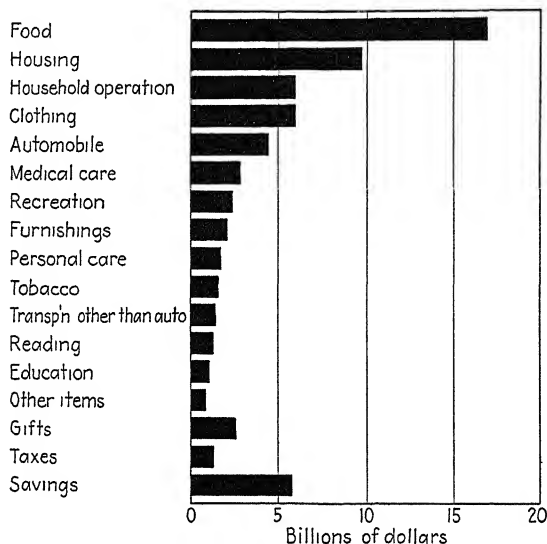


FIG. 91.—Aggregate disbursements of American consumers by major categories, 1935-1936. Total, \$59.2 billion. (*National Resources Committee, "Consumer Expenditures in the United States."*)

outlay of all consumers, totaling \$549 per capita, was distributed among different uses.

An entirely different basis for classifying expenditure for consumer purposes distinguishes the outlay for services and that for commodities of varying degrees of durability, and is of significance as suggesting the possibilities in the fluctuations of consumer demand in the course of the business cycle. A study covering the years 1919-1935 indicates that 40 per cent of the outlay for consumer goods was for perishable commodities, 31 per cent for services not embodied in new commodities, 17 per cent for semidurable goods, and 12 per cent for durable goods.

In discussing the standard of living very little has been said as to the reaction of the forms of consumption on production. This is not because that reaction is unimportant but because it is commonly so obvious as to make discussion of the point superfluous. Those forms of consumption

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that either increase or impair the efficiency of workers and entrepreneurs need no elaboration. Nor need it be stressed that, although more abundant consumption is the great economic objective—always remembering that economic goods are only means to more ultimate ends—it is more abundant consumption over the generations that will be the goal of any farsighted people.

Summary. We may now profitably look back for a moment over this long record and ask: what have been the outstanding contributions to a

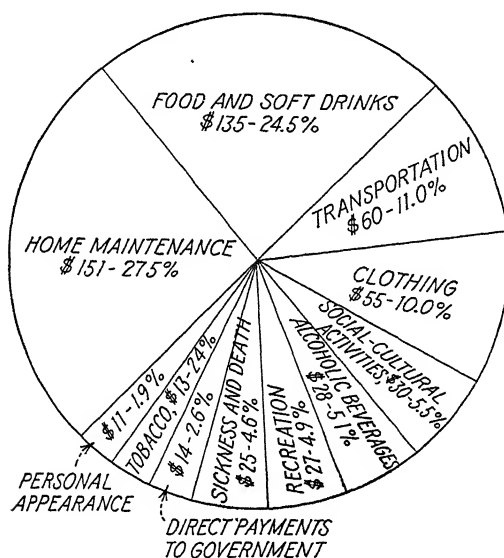


FIG. 92.—What the average American consumer purchased by classes, 1937. Total, \$549 per capita. (Reproduced from National Industrial Conference Board, "Studies in Enterprise and Social Progress.")

higher standard of living? While accurate evaluation of such complex things is impossible, at least three contributions seem to stand out above all others: (1) the increase of leisure time, not only per week but per lifetime; (2) the prolongation of life expectancy and the decrease of human suffering from disease; (3) the spread of education. These greatest gains it should be noted are all intangible in character; the direct results are embodied in the life of human beings, not in material goods. Though fundamentally due to the interaction of many things, and first of all to the progress of science, they could not have been made available on so vast a scale without the great increase of the economic means by which they were supported.

There were also substantial contributions that directly, at least, took a more material form. Among the three categories of goods that absorb much the greater portion of total consumer outlay, the chief gain in food

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was in variety and improved diet rather than in quantity. The very marked gain in housing was not so much in the mere element of shelter as in the equipment for heating, plumbing, and lighting and lessening the drudgery of housework; the gain in furnishings largely took the form of greater comfort and attractiveness. In clothing, the gain due to lower cost took the form of more abundant and varied wardrobes with less distinctions between classes. But an additional and important gain arose from the decreased proportion of consumer outlay that was absorbed by these three categories of essentials. The proportion thus made available for other purposes is estimated to have risen from about 8 per cent in 1775 to 26 per cent in 1935-1936; no small share of this was added to the outlay for the varied pursuits of leisure time. Finally, there should be listed among the important gains the effects of the growing activities of government which were of particular significance as tending to give the great masses a larger proportion of vitally important consumers' goods and services than they would otherwise have obtained.

The standard of living attained by the American people as a result of the progress which the preceding account has attempted to summarize is commonly believed to be the highest in the world, certainly the highest in any great nation. International comparisons of the standard of living are beset with many complicating factors owing to the divergent conditions and habits in different countries. We now have data for many countries which enable us to make approximate estimates as to the comparative situation in recent years. The most recent calculation, that of Colin Clark,¹ ranks the standard prevailing in different countries during the period 1925-1934, as measured by the average real income per capita of the working population, as follows:

United States	100	Sweden	47
Canada	97	Germany	47
New Zealand	94	Belgium	43
Great Britain	77	Norway	39
Switzerland	74	Austria	37
Australia	71	Japan	26
Netherlands	63	Poland	25
France	50	Italy	25
Denmark	49	U.S.S.R.	23

Less complete data give India an index number of 12; that for China is substantially lower. In the last few years, however, New Zealand is estimated to have surpassed the United States. Clark's study indicates that, on this basis of measurement, the standard in the more advanced

¹ CLARK, COLIN, "The Conditions of Economic Progress," London, 1940. An important historical and analytical study.

nations of Europe is from two-fifths to three-quarters that in the United States; in most of the rest of Europe, as well as in the greater portion of South America, it is between a quarter and a third of the American standard.

After a reading of the preceding account of the American achievement in raising the standard of living, it is somewhat disconcerting to meet the frequent assertion that despite these gains a third of the American people are still ill fed, badly housed, and poorly clothed, and suffer in many other ways from a standard that fails to provide even essentials. In the first place, it must be realized that such statements rest upon a conception of what is essential and what is needed in the form of food, clothing, and shelter that includes not a little that never would have been included in the concept 175 or even 100 years ago. Just as our idea as to what is a decent standard today includes much that was practically undreamed of in early times, so the idea of what constitutes a minimum standard has risen; and that very rise, which causes us to condemn the standard that prevails among a third of the population today, is largely a product of the gains made in advancing the standard of the people as a whole.

It should also be noted that even this underprivileged third have secured a substantial, even if not a fair, share in what our preceding analysis indicated as the most important gains in the actual standard of living. In the case of the gain in leisure time they may be assumed to have secured a large portion of that obtained by most; in the case of more education almost as much might be claimed; even in the case of better medical care, where the proportionate gain was undoubtedly very much smaller, it still must have been substantial. Nor was the progress made by this group in securing a better provision of the more material goods unimportant.

Although the existence of what is now considered a low standard of living among a large group should not lead us to overlook the past gains, it obviously suggests how great and how serious a problem still confronts the country. That there is yet much that could be done to alleviate the condition by securing a better distribution of income is plain. When we face the hard fact that even the extreme measure of an equal distribution of income would provide only what might be considered a minimum of decency, we must realize how much the hope for long-run progress depends on improving the processes of production.

CHAPTER XLVI

SUMMARY AND SOME CONCLUSIONS

Introduction. Having reached the close of our general survey of the economic history of the United States, we can now profitably look back over that record as a whole and, unconcerned with the details that have occupied our attention when dealing with the various special fields of economic activity, endeavor to secure a summary picture of the general outcome as far as the growth of wealth and income is concerned. Also, we are now in a better position to look back over that development with the purpose of formulating a summary analysis of the main factors contributing to the results achieved and so to secure a clearer view of the forces that have dominated our economic development. Finally, by surveying this past experience to learn the most common causes for mistakes and failures in the efforts at social guidance, we can attempt to formulate a few of the most important conclusions that should prove of value as a guide in our endeavor to secure a better social control of our economic development in the future.

The Growth of the National Wealth. The available figures on national wealth are far from satisfactory, especially those for any period before the latter part of the nineteenth century, and can be considered only as providing a very rough approximation to the facts. The census has estimated the total in 1790 at \$552 million in the money of that time. By 1860 the total, including slaves but excluding nontaxable property, was just over \$16 billion which would be equal to \$39 billion in 1926 dollars. Using the 1926 dollar equivalent to avoid the distortion due to changes in the price level, the total, including nontaxable property, rose to \$192 billion in 1900 and to \$347 billion in 1922, the last year for which the census has made a report. A recent estimate places the figure for 1937 at \$322 billion in current dollars, or \$342 billion in 1926 dollars.

This tremendous growth in the total national wealth is particularly significant for its bearing on national security since it has made the country by far the richest nation on earth. Even before the first World War the national wealth was estimated as almost equal to that of England, Germany, and France combined. In an age when control of wealth has become a more important factor than ever in the conflict of nations this development has greatly enhanced our political power and prestige.

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More important from the point of view of its contribution to the economic well-being of the people is the growth in national wealth per capita. The estimated wealth for 1790 gives \$171 per capita for the free population; the corresponding figure for 1860 is almost \$590, or \$514 for the total population, which was equivalent to about \$1,240 in 1926 dollars. Later figures, in 1926 dollar equivalents and including nontaxable property, are about \$2,520 in 1900, \$3,360 in 1922, and \$2,640 in 1937, thus showing

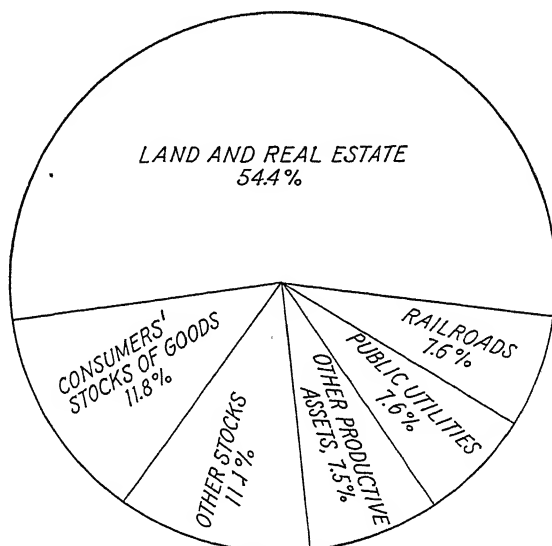


FIG. 93.—The various forms of the wealth of the United States, 1936. \$307.6 billion = 100%. (Reproduced from National Industrial Conference Board, "Studies in Enterprise and Social Progress.")

a marked growth up to the end of the century but a loss of most of the subsequent gain after the outbreak of the depression.

Concretely this wealth, as is indicated on the chart above, is made up of a great variety of economic goods some of which are being used up from day to day by both producers and consumers; much the largest portion consists of more durable objects, the greater share of which is made up of producers' goods. The outstanding fact is that over half of the nation's wealth is made up of the value of land and buildings, whereas tangible personal property is but a small proportion of the total.

For the most part this wealth is the product of a continued process of saving by the people as a whole which has been going on for generations. The chief exception to this would be the wealth represented by that portion of the value of land that could not be attributed to some improvement. Just how great that portion would be it is impossible to determine, but undoubtedly most of it would be found in the urban land values;

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even there the value added by improvements both public and private is large. In the case of most farm lands the portion of value not a product of improvements is generally considered to be relatively small, if existent at all. This rising per capita accumulation of wealth, chiefly in the form of durable producers' and consumers' goods, which each generation passed on to the succeeding generation was obviously an important factor contributing to the rising standard of living.

The Growth of the National Income. It is the national real income per capita rather than national wealth that is fundamental in determining a nation's standard of living. So the record of the increase in that income may be considered the most inclusive and important statistical measure that we have available for estimating the progress made in raising the standard of living. Measurement of the national income is a difficult undertaking at best, partly because the data available, though much more abundant for recent decades than for the nineteenth century, are still far from adequate and partly because of problems involved in deciding just what should be included in the estimate. Without attempting to discuss the latter here, we may simply note that such estimates do not include the product of the housewife's labors, clearly an important item, but one at present impossible to measure. Also, it should be noted that, since national income covers only economic goods and services, it takes no account of leisure time, which was an element included in our definition of the standard of living.

Recent estimates by the National Industrial Conference Board provide the best survey over the period since 1799 that is available; admittedly they are only rough approximations for the first half of the nineteenth century but much more dependable for the twentieth century. The figures that show realized national income per capita are given in 1926 dollar equivalents to eliminate the effects of shifting price levels and so show the change in the quantity of goods and services with the rising per capita income. As indicated on the chart (page 1063), starting in 1799 at \$211 there was a downward trend to \$166 in 1829 which was followed by a substantial rise to \$300 in 1859. The Civil War caused a temporary setback but there ensued a long period of rapid advance which carried the figure to \$459 in 1900, to \$545 in 1914, and finally to the peak of \$625 in 1929. In the depression it dropped to \$472 for 1933 but by 1938 had recovered to \$533 which was around the prewar level and about two and a half times that of 1799. This gain becomes the more impressive when we remember that it was made despite the great increase in leisure time secured during this period, not to mention the effect of the large volume of unemployment on the figures for the recent depression years:

Some additional light on the trend of real incomes is provided by the estimates of Colin Clark, though only for the period since 1850. These

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endeavor to measure the real income per capita of the working population rather than that of the total population, and include additional estimates for changes due to the shorter working week or to unemployment. The most significant results indicate a very rapid rate of increase in the per capita real income of the working population during the period from 1850 to 1900 and a very marked reduction in the rate of growth since then. During the former period there was an increase of 63 per cent, but in the latter period the increase up to the peak in 1929 was only 18 per cent and in 1937 the greater portion of this last increase had been lost. The marked

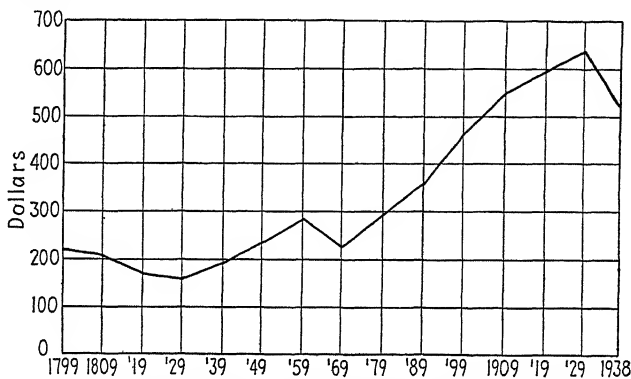


FIG. 94.—Per capita realized production income adjusted to cost of living, 1799–1938. (Reproduced from National Industrial Conference Board, “Studies in Enterprise and Social Progress.”)

decline in the rate of gain since 1900 is to be attributed chiefly to the reduction in the normal hours of work but also, especially of late, to increased unemployment, for productivity of real income per hour of work increased. Up to 1900 this increase was rapid and only moderately offset by shorter hours. After making little advance up to 1914, hourly productivity again rose rapidly, but the effects of this gain were substantially decreased by shorter working hours and then by unemployment. It is important we should realize that the great increase in leisure time has not been obtained without a substantial reduction in the potential real income of the people.

The changes that took place in the concrete forms of this real income during the course of time were outlined in Chap. XLV and so need not be summarized here, but we should make note of the long-run changes that occurred in the relative importance of the chief branches of economic activity contributing to the national income. The outstanding developments here since the first of the nineteenth century, as the chart (page 1064) indicates, are the decline in the relative importance of the contribution obtained from agriculture and the marked growth of that obtained from manufacturing and from trade and services. Such a trend is fairly

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typical of countries experiencing rapid economic development. In the early period the extractive or primary industries are dominant; as manufacturing rises and the nation becomes industrialized the extractive industries, particularly if they have to face growing competition from newly opened regions, decline in relative importance.

As transportation costs are lowered and specialization, both regional and personal, increases, all the fields of activity having to do with the

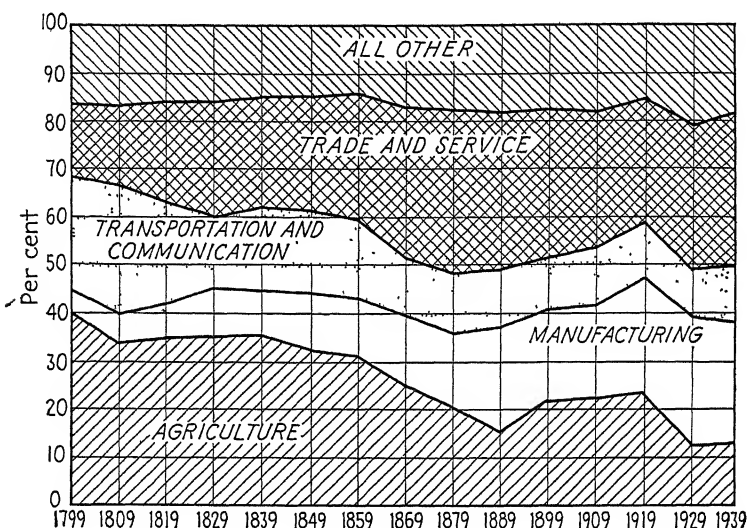


FIG. 95.—Percentage of total realized production income contributed by different branches of economic activity, 1799–1938. (Reproduced from National Industrial Conference Board, “Studies in Enterprise and Social Progress.”)

processes of exchanging goods and services, sometimes called the “tertiary industries,” grow in importance while an increase in wealth also leads to a marked expansion in the field of personal services. The outcome of this trend is shown in more detail in the chart on page 1065 covering the period 1919–1934, which will serve to provide a clearer idea of the relative importance of these various lines of activity at the present time.

It is also desirable to view income with reference to the portions contributed by the chief factors of production, even though no complete classification on this basis is obtainable and it seems best to be content with an estimate that does not go back of the present century. The important point brought out by the chart (page 1065) showing the realized private production income for the period since 1899 is the predominant proportion of the total that is due to hired workers of all kinds, both salaried and wage earning. On the average their work yielded about two-thirds of all production income during this period; the proportion going to them showed a marked upward trend after 1914. In other words,

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hired employees produce and receive much the largest share of the private production income. From this estimate it will also be seen that the return on invested capital in the form of interest, dividends, rents, and royalties

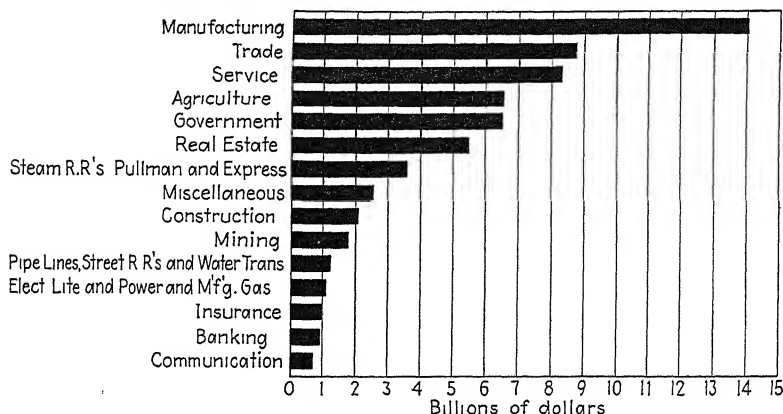


FIG. 96.—Average volume of all income payments for industries, 1919-1934. (Based on figures of the National Bureau of Economic Research.)

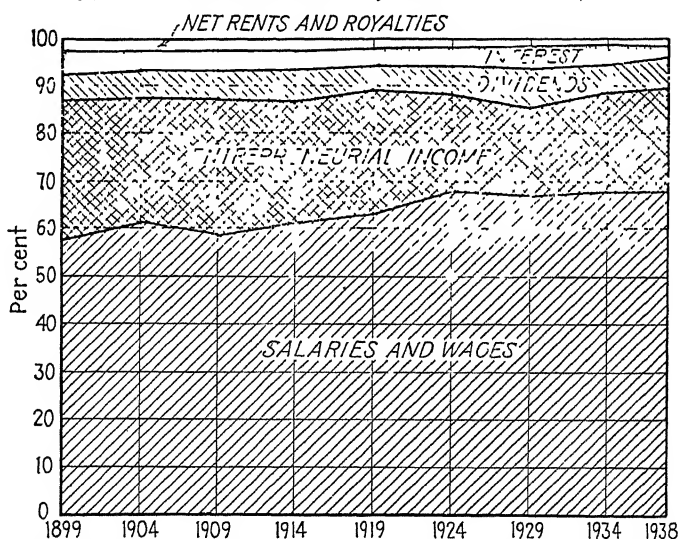


FIG. 97.—Realized private production income, 1899-1938, percentage by sources. (Reproduced from National Industrial Conference Board, "Studies in Enterprise and Social Progress.")

was always relatively small, never as much as 15 per cent and typically around 12 per cent of the total, though there is a widespread popular impression that it is much larger. The entrepreneurial income representing the return obtained by single individuals or partnerships, in all forms of private enterprise from farming to merchandising and professional

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services, includes the return on such capital as they owned as well as that for their entrepreneurial labor. The decline in the proportion of the total represented by this share from nearly 30 per cent to around 20 per cent is chiefly a product of the more rapid growth of the volume of production under the control of corporate enterprise. The chart for the year 1929, just below, based on a slightly different calculation, is of interest as

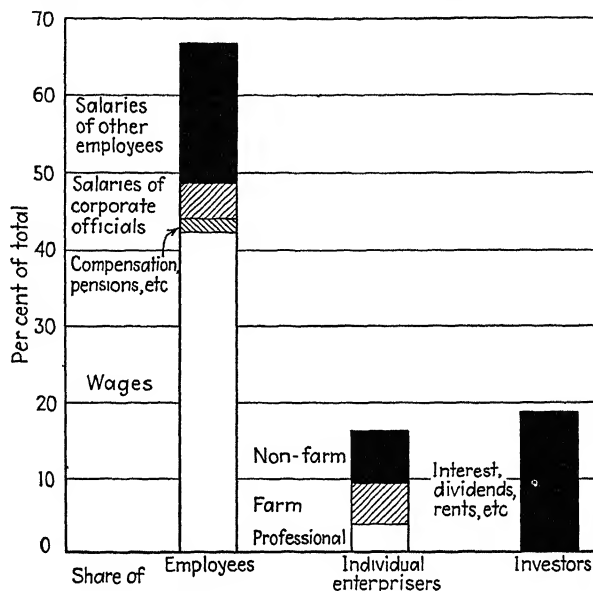


FIG. 98.—Division of income from productive activities among major claimants, 1929. (Reproduced from M. Leven, H. G. Moulton, and C. Warburton, "America's Capacity to Consume.")

showing in more detail the division of the shares among the different groups.

The Chief Factors in the Growth of the Per Capita Real Income. We can now turn from this summary of the trends in the growth of wealth and income to inquire what a survey of the country's economic history indicates as the chief factors responsible for the results achieved. In Chap. I it was stated that the answer to such a question was the main immediate objective of the study of economic history when approached from the economist's point of view, the ultimate economic objective being to learn, from the analysis of the causes for past successes or failures in the efforts to raise the standard of living, how to secure more effective social guidance of future efforts directed towards that end.

Chapter I also outlined the chief factors that determine the amount of the real national income and its distribution and the following summary historical survey of the main developments affecting those factors will

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adhere to that outline. Accordingly, we will first take up the developments reacting upon the quantity and the quality of the four factors of production, then turn to those affecting the economic and social order under which they were used for the purposes of production, and, finally, note the developments affecting the way in which the income thus produced was distributed.

It should be remembered, however, that back of these developments there was the institutional framework in which they took place and also the motivating force of the desire to raise the standard of living. In that framework the continuance, with but slight modifications, of the systems of private property, freedom of individual initiative, and a competitive economic order, combined with the great economic opportunities developing, provided unusual incentive and scope for private enterprise. The mode of living chosen by the American people was one that involved an ever increasing dependence on economic goods and services for its fulfillment. The simple life of the ascetic made no appeal to most; the decreased labor required to provide the absolute necessities of existence did not lead to the use of the greater leisure thus made possible for abstract contemplation; the more the people had of economic goods and services the more they wanted, and such increased leisure time as was taken was commonly devoted to pursuits that required still more economic goods and services for their maintenance. Thus there was practically no decrease in the motivating force behind the effort to advance the standard of living.

Developments Affecting the Four Factors of Production. Starting with the factor of natural resources the most obvious contribution to its growth came from the great additions obtained through the territorial expansion of the country, most of which took place during the first half of the nineteenth century. These acquisitions were important in adding to the variety as well as to the quantity of natural resources under our control. It must be remembered, however, that many of them did not attain economic significance until much later. It required exploration, often aided by science, before the existence of some resources was made known, and this process is not yet finished. Scientific and technological advance gave value to many resources once considered useless. Similarly the westward movement of population, the introduction of cheap transportation facilities, and other improvements were necessary before the resources of many sections became of economic significance. A prodigal policy in the disposition of the public domain, at least until the first of the twentieth century, made these resources easily available to the people and hastened their development.

On the other hand we must not forget that in the course of time many of the original resources have become seriously depleted. Much of the

stock of wild game, fish, and fur-bearing animals has disappeared; in many sections, even where it was not an obstacle to agricultural uses of the land, the valuable timber has been cut off or destroyed by fires with no adequate provision for reforestation; enormous quantities of non-replaceable oil, gas, coal, and minerals have been taken out of the ground, and much fertile soil has been washed away or exhausted. The rapid growth in our wealth and income took a heavy toll from the country's natural resources. To that extent, as time went on, the great comparative advantage which the country possessed in the low cost of this factor of production was diminished.

Labor, using the term in the broad sense, is the factor of production making by far the largest contribution to the national income; hence the developments affecting the supply and quality of this factor are particularly important. The growth in the country's labor supply has been determined, first of all by the growth of population, which in turn is a product of the natural rate of increase resulting from the birth rate and the death rate and the net immigration or emigration. The outcome, as we have seen, was a phenomenal rate of growth in population, approximately one-third every decade down to 1860 though it has now fallen to about one-fifth of this rate. As a result, by 1860, the total population was nearly equal to that of France or Germany; today, it far exceeds that of any other country except Russia, India, and China. The constant inflow of immigrants, among whom the percentage of males of working age was high, resulted in an unusually large proportion of active workers in the total population. Much of the cost of raising the immigrant portion of this group was borne by other countries.

Out of the total population able to work an unusually large percentage did engage in economic activities, for the desire to acquire wealth was widespread and the leisure class relatively small. Not only were the hours, days, and years of leisure relatively meager until quite recent times, but the intensity of work was fairly high. It may also be claimed that, except in some of the crafts where considerable manual dexterity was required, in which we have always been weak, the general quality of the workers has been high. For this the unusually extensive provisions for public education should be given much credit. As a result of these numerous factors the labor supply of the country has been considerably greater and more efficient than would be typical of older countries possessing an equal number of inhabitants; put in other words, what might be called the per capita labor supply has been relatively high.

The growth in the supply of capital in a country depends primarily upon the savable fund and the effective desire of accumulation. The great increase that took place in the annual savable fund in this country was a product of all the innumerable developments that raised the per capita

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income of the nation. Despite the fact that a steadily growing amount per capita of this savable fund was being used to maintain a rising standard of living, the people were able to save a greater amount than ever before. This was due to various things. The maintenance of peace and order and the careful protection of property rights gave greater assurance that those who saved would enjoy the fruit of their abstinence. Education developed foresight as to future needs and generally tended to create a desire to provide a higher standard of living for one's self and one's children. At the same time the growth of various financial institutions, such as savings

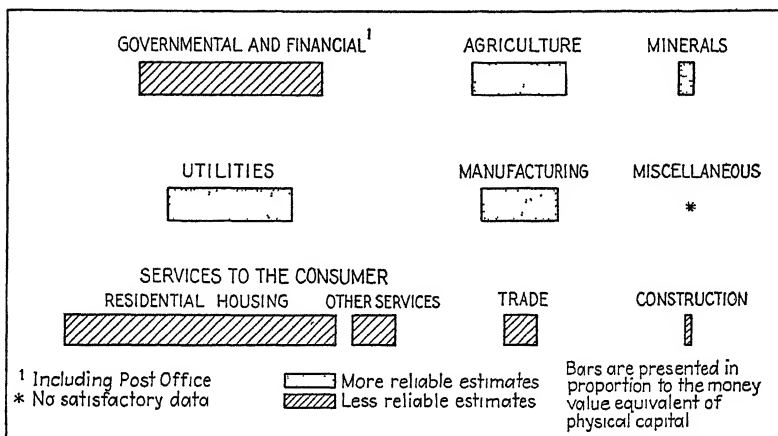


FIG. 99.—Physical capital employed in segments of the American economy, 1935.
 (National Resources Committee, "The Structure of the American Economy.")

banks, investment banks, and life insurance, provided better facilities and aids for saving than ever before.

Although nearly all of the growth of accumulated capital in the country resulted from domestic saving, a small addition came from foreign investments in this country, the amount of which rose from around \$400 million in 1860 to around \$6 billion in 1914. Of course this contributed to the income of the American people only as the use of this capital yielded a return greater than the sum paid to the foreign investors. The period of the first World War marked the shift of the United States from the position of a debtor to that of a creditor nation. Though there had been a small outflow of American capital to foreign countries before this date, it attained enormous proportions in the decade following the end of the war, not to mention the large government loans during the war. It thus appears that the accumulation of capital in this country had reached such a point relative to the domestic demand for it that many people considered the prospect of return on foreign investments more attractive than that to be obtained within the country. Though the return on these

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foreign investments, such as it is, is not a part of the national income in the sense of having been produced within the country, it has added to the income which the American people received and could use either for saving or for maintaining a higher standard of living.

The steadily mounting accumulation of capital acquired through saving was for the most part embodied in relatively durable producers' goods: factories, warehouses, office buildings, machinery, railroads, and endless other goods of similar character. Most of these goods were constantly being worn out or becoming obsolete, though at greatly varying rates. As they were discarded, they were commonly replaced, usually out of earnings set aside for the purpose, by new goods of an improved character. It was in this manner that much of the advance in science and invention was applied in the processes of production and in this sense we can say there was a constant improvement in the quality of capital goods. It should be noted, however, that whereas the accumulation of the capital fund tended to increase the national money income (though somewhat offset by the decline in interest rates), these improvements in the quality of the capital goods in which the capital fund was embodied, although not without effect upon the money income, were chiefly important in reducing the costs of goods and services and so increasing the real income of the people. Thus each new generation has inherited from the preceding one a greatly augmented supply of capital goods of a constantly improving quality to be used in providing for its economic wants. The extent of the advantages thus accruing to the present generation, as contrasted with those of three or four generations earlier, can hardly be exaggerated and certainly is seldom comprehended by those brought up in the twentieth century who take the results as a matter of course.

The development of the supply of the factor that we call business management or entrepreneurship is more difficult to determine in the absence of any satisfactory basis for measurement. It is significant, however, that by the opening of the twentieth century there was a widespread belief that American men of business were the ablest in the world and many foreigners were coming over to study their methods. The great resourcefulness, energy, initiative, and daring of the so-called "captains of industry" were widely acknowledged and very generally acclaimed. In the development of this entrepreneurship, various conditions in the country's environment played a part. The mobility and democracy of the economic classes helped to bring latent business ability to the surface. The unusual economic opportunities existing in the new and rapidly developing country provided incentive and unusual scope for the employment of such ability, and the dominance of the laissez-faire policy allowed great freedom for individual action. The rapidity of the country's development, by so frequently justifying the optimistic, speculative hopes, helped

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to engender the spirit of daring enterprise. These same conditions tended to lessen the inertia, the extreme conservatism, and the adherence to tradition inimical to the adoption of new methods and ideas. Finally, the general spirit of work and the absence of any social taboo upon engaging in business tended to draw a larger portion of the ablest men into the field of business than in many other countries. All things considered, it is seldom if ever that conditions more favorable to the development of individual business enterprise have existed than in the United States of the nineteenth century.

The Development of the Economic Order. Although the quantity and quality of the various factors of production are fundamental in determining the productive capacity of a country, the manner in which these resources are combined or employed as shaped by the existing economic and social order must also be considered. That the economic order reacts upon the factors of production just as they in turn react upon it must be obvious. So we now turn to a summary of the more outstanding developments in this order contributing to the increased productive capacity of the country, as described in more detail in all that has preceded.

With a given supply of the factors of production and state of technical knowledge, the potential output can be increased by anything tending to give more perfect mobility to the factors of production or more perfect knowledge of the available supplies, for these conditions increase the likelihood that the economic resources will be employed in the place and for the purpose where their productivity will be greatest. Thus the development of all facilities increasing the efficiency of the processes of exchange or marketing becomes of great importance. A glance backward over our economic history will suggest how great have been the changes wrought in the processes of exchange and the manifold organization through which they are carried on.

Outstanding in their contribution have been the improvements in transportation and communication facilities. Through the better technical devices made available by science and the efficient organization of the business of transportation, the mobility of individuals and of commodities has been enormously increased; goods which formerly it did not pay to transport 100 miles can now be economically shipped halfway around the world with a speed that has been similarly increased. Even more remarkable, perhaps, have been the improvements in communicating facilities, in part owing to the better transportation and in part to technological advance such as the telegraph, the telephone, radio, and cheaper methods of printing.

Today the morning paper provides its reader with news of important economic and political developments of the previous day gathered from all over the world and is available to the masses. In the eighteenth cen-

tury it took weeks and months for such news to spread abroad and few could afford to buy a newspaper. Today one can communicate with and secure a reply from individuals from the Atlantic to the Pacific or across the seas in a few minutes, whereas a century or more ago this might have required many months. Through the greatly increased mobility thus provided, the market areas for economic goods have been expanded till in a great many cases they are not only nationwide but world-wide in scope. As a result the economic advantages of territorial specialization and division of labor have been enormously increased.

These changes have naturally made the problems connected with the development of an efficient marketing organization more complex as well as more important. The almost endlessly ramifying mechanisms that enter into the marketing organization for different kinds of goods and services include all the means employed to gather the information and the goods and to bring together the buyers and sellers who operate on the market. The very highly developed organization which has been evolved for certain goods is illustrated by the markets for dealing in money, securities, grain, cotton, silver, copper, and numerous other commodities. Although relatively few things are provided with such a highly developed organization for trading as is found in the exchanges for dealing in stocks and various raw products and there is a great variation in the facilities available for carrying on trade in other goods, yet these facilities are in every case vastly superior to those available in former times.

The great development of various financial institutions has contributed its part in facilitating the processes of exchange as well as in providing a more efficient organization for carrying on other work of the economic order. In place of the inadequate and uncertain money of earlier times, the country has secured an adequate supply of specie and the various forms of paper money have been made relatively stable except in times of war and its aftermath. Through the rise of innumerable institutions, among which the banks are most important, the means for extending credit have been enormously expanded, thus facilitating the transfer of control over productive resources to those who could make the best use of them. However, we must confess that we have not yet learned how to control the use of credit so as to prevent its throwing the whole economic mechanism out of gear.

In addition, the banks and trust companies have developed an endless variety of services for facilitating all sorts of financial transactions. Together with the stock exchanges, the brokers, the mortgage houses, and investment bankers, they have provided adequate facilities, unfortunately not free from abuse, to handle the greatly increased volume of security issues so essential to large-scale business enterprise. Savings banks and life-insurance companies have arisen to provide facilities and

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inducements for saving. Endless other forms of insurance now make possible an even distribution of many kinds of financial losses which otherwise might fall with crushing weight upon single individuals. At the same time this has greatly added to the stability of innumerable business undertakings.

Finally, there is to be noted the remarkable development of the economic functions of the government. The attainment of political independence freed the country from English control and enabled it to establish the type of government deemed best adapted to its needs. The adoption of the Constitution provided a more efficient means for furthering this objective. The extent of these governmental activities today as contrasted with the situation a century or more ago can hardly be realized by our generation accustomed to the present-day order. How manifold have become the positive governmental activities in providing goods and services as well as those of a regulatory character has been indicated in earlier chapters and need not be repeated here. In the main, it has been necessary to assume these new activities as best could be done under the general distribution of powers set up in the Federal and the state constitutions. Since this governmental framework has proved far less susceptible to change than the economic order, a growing lack of adaptation has resulted and the efficiency with which the state might carry out its economic functions has been impaired.

Although these various developments in our economic organization have greatly contributed to increasing the economic productivity of the country, it must also be remembered that these gains have not been entirely free from certain disadvantages which at times impaired the potential productivity. As the organization became increasingly intricate and the growing interdependence of the parts necessitated a more effective coordination of the whole, the task of securing such coordination became more complicated and difficult. The resulting dangers were most clearly reflected in the business cycle with its attendant evils and losses. Except as the initiating cause of such difficulties has its origin in war, this problem is to be traced back to the growing complexity of the economic order and inadequate control of credit and the circulating medium. Another development increasing the difficulties in securing proper coordination is the great growth in the use of fixed, specialized capital goods, making it hard to adjust output to fluctuating market demands and in turn tending to undesirable forms of competition and not infrequently to monopoly. That the competitive system results in a certain amount of duplication and waste is commonly recognized, but it is argued that this is but the element of cost in obtaining the greater gains of progress through the process of selection provided by the competitive struggle. This must be the main justification for the continued acceptance

of the competitive system. The question may still be raised whether in certain activities, such as oil production or coal mining or in the field of marketing, the wastes are not excessive and measures to curtail them much to be desired.

Though the preceding summary of developments affecting the fundamental factors determining the growth of the nation's income has been largely confined to those in the United States, it must also be kept in mind that our country did not live in economic isolation and that developments throughout the rest of the world, many of a character similar to those in the United States, also contributed a substantial element to the rise in the American standard of living. Basically, this contribution was a product of the trend toward a more nearly world-wide specialization and division of labor, carried out chiefly through the mechanism of international trade but also resulting in greater mobility of labor, capital, and entrepreneurs and the more rapid diffusion of knowledge. Immediately greatly facilitated by the vastly improved means of communication and transportation over land and over sea, there lay back of it all the developments affecting the economic growth of other nations and their international economic relations.

In Europe the rapid increase of population and wealth that accompanied the industrialization of the western portion provided a market for the expanding output of cotton and foodstuffs in the United States and a supply of cheap manufactured goods for American imports as well as the cheap labor and capital so much in demand in the United States. As other continents were developed by settlement or opened up to trade, new sources of supply for raw materials or foodstuffs became available—wool, hides, and coffee from South America, silk, tea, jute, tin, rubber, and vegetable oils from the Far East, nickel and wood pulp from Canada, to mention only a few. In time, these regions also provided a market for the rising output of American manufactures. Though some of these developments proved unfavorable to the United States, such as the increased output of products competing with American exports or the rise of tariff barriers, and the United States often failed to take full advantage of the potential gain by erecting tariff barriers of its own, the net result of the developments in the rest of the world was an important contribution to the American standard of living.

Developments Affecting the Distribution of Income. Whereas the per capita income of a nation is the fundamental factor setting definite limits to the standard of living, the way in which that income is actually distributed is also a factor in the situation, since marked inequalities will result in lowering the general average. Just what distribution would produce the maximum of satisfactions, considering the varying wants of men, cannot be determined and need not concern us here, since nearly

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everybody would agree that it would certainly be one involving less inequalities than have existed heretofore. Our concern, therefore, in the summary of historical developments affecting the distribution of income will be with those changes reacting upon the basic institutional arrangements which control distribution, and particularly with such as tended to alter the general pattern of income distribution. It will be found, however, that in this phase of the economic order such changes as occurred fell far short of having the revolutionary character of those that took place in the field of production.

In this country from the beginning, the institutional bases of the conditions governing the distribution of wealth and income have been the rights of private property and comparative freedom of individual enterprise in an essentially competitive economic order. The assumptions underlying the general acceptance of these institutional bases were that individual initiative and protection of the rights of private property best provided the incentive needed to increase the national income and that, in general, competition, by a process of struggle presumed to eliminate the incompetent, would result in the survival of those best fitted to serve economic wants and so further economic progress. That this institutional setup was a factor of the greatest importance in stimulating production and in increasing the real income of the nation, even though it often worked imperfectly, has previously been indicated. Its effect on the distribution of income was equally, if not even more, important. Therefore, such developments as tended to alter these institutions, even though limited in their consequences, require summarization.

Because the institution of private property still exists in all its essential elements, we are apt to overlook the innumerable ways in which the right to do as one likes with one's own property has been curtailed over the course of time. Today the owner of city real estate finds that the uses to which he can put it are limited in many ways: if he wishes to erect a building upon it, the construction, size, and materials used must conform to elaborate city building and health codes. The growth of limitations upon the use of a wide range of specific types of property was one of the significant developments affecting this institution. Similarly there are definite limitations on the way in which one can dispose of his property by will. The right of the state to take property by taxation has always been recognized, but the extent to which this right has been employed as a result of the expanding activities of government and used to alter the distribution of real income can only be appreciated as we look back over the historical development.

The right of eminent domain has been granted for an increasing number of purposes. At times, practically, if not in the technical legal sense, the state has not hesitated to annihilate private property rights

on a vast scale, either directly or indirectly, as in the abolition of slavery, the adoption of prohibition, or the recent devaluation of the dollar. On the other hand, the Fourteenth Amendment of the Constitution, as interpreted by the courts and supplementing the Fifth Amendment, has proved a great bulwark of defense against many attempted inroads on such rights. Private property remains only rather slightly modified as one of the basic features of the economic order.

Much the same statement could be made concerning freedom of private enterprise, though here the development of governmental limitations has been rather more marked. Some pursuits have been forbidden altogether and a rapidly growing number are debarred to those who have not secured the requisite license. In preceding chapters we have had space to note only a small proportion of the cases where freedom of action in the conduct of business enterprise has been restricted, mostly instances of Federal, some of state, but very few of local government interference. We need only recall the legislation regulating banking, insurance, railroads and other public utilities, shipping, labor conditions, stock and commodity exchanges, trusts, and public health to suggest the manifold expansion of such restrictions wherever it was deemed socially desirable.

Finally, the competitive system, though still basic in the economic order, has undergone very substantial changes. In fact the system never provided many markets in which the value of goods or services was determined under conditions approximating perfect competition; more or less imperfect competition has been the rule rather than the exception. Yet the scope and intensity of competition have varied greatly from period to period, steadily increasing until a peak was reached about the last quarter of the nineteenth century, since when the trend has been reversed. The end of the competitive system still seems more distant than many claim.

If we look back over our history, however, we do find many instances where the government has sought to alter the conditions under which competition was allowed to operate. In certain lines of industry where the wastes of competition appeared to outweigh the gains, as in the case of public utilities, the system of regulated monopolies was adopted. In other cases the incentive provided by a monopoly grant such as a patent, copyright, or the early grants for bridges has found favor. Generally, however, the fear of monopoly has been a characteristic of the American people, as many incidents in our nineteenth-century history show. Until very recently, legislation has been more frequently exercised to prohibit monopolies and to create conditions tending to lessen the imperfections in the competitive system and to eliminate methods of competition that were likely to generate monopoly.

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In Chap. I it was stated that all economic transactions had a reaction on the distribution of wealth or income and all private business was a struggle between the participants to secure a larger share of these same things. It has just been indicated that the basic institutions shaping the conditions under which this struggle was carried on experienced only very moderate alterations in the course of historical developments. We can now profitably cast a glance back over this history to note the activities of a few of the more important groups participating in this struggle over the distribution of wealth and income under the existing institutional order, though it must be emphasized that the number of such groups was legion. One of the most striking developments to be seen is the growing tendency of various groups to develop some type of organization designed to secure the power and resources of united action for use in pushing their economic interests, both in the arena of business and, by means of legislation, in the political arena.

Reviewing our history we see how, as the employers gained in power over the wage earners and as the increasing size of the business unit made them less dependent upon individual services, the workers organized their unions to offset this. Then, as the unions grew in power, the employers in turn formed their associations. In the political arena, both groups fought for or against labor legislation and immigration restriction. The conflict between debtor and creditor is constantly reappearing in the struggle to obtain easy credit and cheap money. Landowners and landlords oppose the demands of the landless for free access to the public domain and of renters for more favorable terms of rent. Even within each of these groups there were internecine conflicts: trade unions had their jurisdictional disputes, capitalist lenders were in keen rivalry over investment opportunities, as were landlords in their effort to secure tenants.

There was the all-pervading rivalry between different industries in their effort to attract the customer's dollar; innumerable trade, professional, and agricultural associations were organized for the purpose of furthering each industry's interest in its dealings with other economic groups of all sorts. Wood, coal, gas, oil, and electricity competed with one another for various uses. The stagecoach drivers, ferrymen, and inn-keepers opposed canals, bridges, and railroads; the railroads fought improved waterways and motor vehicles; trade unions restricted the use of more efficient machinery; small retailers fought the chain stores and mail-order houses, just as improvements of all sorts were apt to be opposed by groups that might suffer from their introduction. Also, within each industry, except as monopolistic practices developed, there was the constant struggle for business among the individual concerns.

Similarly, as one looks back over history, he will be impressed with the conflicts among different geographical areas and the efforts of groups in

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each area to secure a larger share of the national income. There was the opposition between the rural farming region and the town, and that between the town and the large city. Different cities vied with one another to attract industry and trade and organized their boards of trade and chambers of commerce to promote local interests. The Atlantic coast ports fought to secure the trade of the West; Middle Western cities endeavored to outstrip one another as distributing centers in the Mississippi Valley. More frequent, as noted in preceding chapters, was the rivalry among the different states as it reacted upon state legislation.

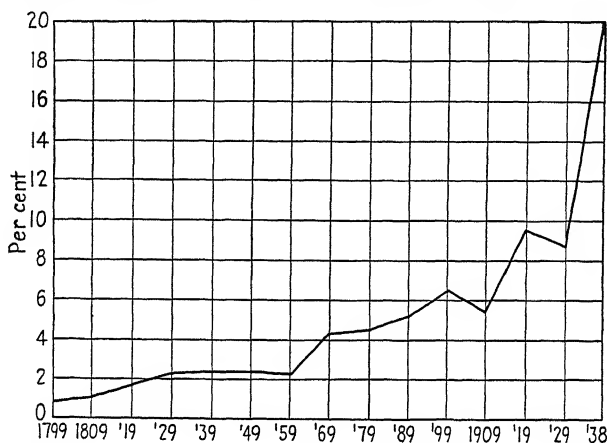


FIG. 100.—Realized income from government, 1799–1938. Percentage of total realized income. (Reproduced from National Industrial Conference Board, “*Studies in Enterprise and Social Progress.*”)

From the beginning there was the competition to attract settlers, capital, and business enterprise. The opposition to any legislation that might make a state less attractive is only too frequently in evidence in the laws concerning labor conditions, banking, corporations, taxation, and many other subjects.

This rivalry was far more obvious among Federal activities in the form of the economic sectionalism which became a dominant factor in shaping both political and economic history. It was the basis of the conflicts between the North and the South or between the East and the West. In fact, as far as the arena of Federal action was concerned, the most continuous and important economic group conflict appearing in our history was that between the wealthy industrial and commercial sections of the East and the poorer agricultural sections of the South and the West. It was also in the field of Federal action that the rivalry between domestic and foreign interests was most obvious. This was reflected in such action as the varied endeavors to stimulate exports and to check imports, to aid the merchant marine, to protect labor against the influx

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of immigrants, or to assist and safeguard the investment of American capital in other lands.

Thus far we have been dealing with activities designed to affect the distribution of income in the field of private business enterprise—activities carried on solely through private groups or through such government action as these groups were able to obtain. We must not overlook the fact that the government also played an important part in determining the ultimate distribution of the benefits in goods and services obtained with the national income, by its extensive activities in providing goods and services and the system of taxation adopted to meet the costs thereof. How significant, for this purpose, was the trend of historical developments should need no further emphasis of repetition here. However, it may be noted that this development also was a product of constant conflict between the groups that paid the taxes and those that received the benefits in goods and services for which the proceeds were used. In addition there were the benefits in goods and services distributed by the rapidly growing charitable and philanthropic organizations financed by private wealth and income. (See the chart on page 1078.)

We can now raise the question as to the general effects of these developments in the struggle over the distribution of income taking place in an institutional framework that underwent but moderate change. Looking back over the factors of production, we note that the return to labor per unit of service showed a decided upward trend; that which went to capital, though subject to considerable fluctuation, showed a moderate decline. In the case of both rent and profit, the factors affecting the return to each piece of land or to each entrepreneur were so varied that no generalization seems possible. Though urban sites as a whole showed a marked upward trend in rent, individual plots were subject to the greatest vicissitudes. The greater responsibilities and opportunities of entrepreneurs created possibilities for both greater profits and greater losses than ever before. The rise of great private fortunes invested in various fields tended to increase the disparity between the income of their owners and that of the masses.

The outcome of all this in recent years, as far as the general pattern of income distribution is concerned, was indicated by the chart on page 1053. In the absence of any data we cannot say how this pattern differed from that of the period before 1860. Estimates based on subsequent data suggest that there was relatively little change in the general pattern from the close of the Civil War till the end of the century but that since then, and chiefly in the more recent years, there has been some trend toward a more even distribution of income. In effecting this trend, the development of the progressive income tax, the estate and gift taxes, and the reform measures of the New Deal have played an important part.

To the extent, therefore, that a somewhat less uneven distribution of private income has been obtained, we may conclude that the average standard of living has been raised. To the gain so secured should also be added that resulting from the action of the government and of philanthropic organizations in supplying free goods and services. With this we round out the analysis of the trend of historical developments as they affected the distribution of income and so reacted upon the general standard of living. It indicates that much less progress was made in furthering a more desirable distribution of the nation's income than was made in increasing the per capita national income and that until very recently the problem of distribution was seriously neglected.

Some Common Causes of Mistakes and Failures. Thus far in this chapter our attention has been centered on an attempt to analyze the main factors and developments responsible for the rising standard of living achieved by the American people. Although it is essential for the purpose of social control and guidance in the future to understand just what made this achievement possible, it is also desirable to glance back over our history with the object of trying to learn why this achievement was not even greater. There has been frequent occasion in preceding chapters to note specific instances of action by the state that seemed unwise; it will, therefore, be profitable as we conclude our inquiry to attempt some generalizations concerning the most common causes for such errors. It should be noted, however, that this is concerned only with the type of social action that took the form of legislation; it does not attempt to cover the causes for failure to attain a higher standard of living due to such things as ignorance, bad judgment, and numerous forms of unsocial economic activities on the part of producers in the conduct of their private economic activities, except as such things affected legislation.

One of the most frequent causes for mistakes and failures in legislation has been the ignorance of the principles of economics or the practice of ignoring them. When undesirable features appeared in the economic order, the tendency was to approach the problems like a bull attacking a red rag, as was once said to be the method used in attacking the railroad problem under the granger laws and was equally true of the original Sherman Act attack on the trusts. Only too frequently there was little effort to study the problem and to analyze its causes or the economic forces and principles involved; yet without such study it was mere chance if the legislation did not prove a dismal failure. Americans seem to have had a sublime faith in the efficacy of a mere law; this was equaled only by their readiness to break the law the moment it interfered with their particular interest. It may not be impossible to enforce a law, whether good or bad, that runs contrary to powerful economic forces, but it is certain to require an extremely powerful administrative arm of the

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government to do so. And a law, formulated regardless of the economic forces that it seeks to control, is more likely to prove bad than good in its consequences.

A moment's glance back at our history shows it is strewn with illustrations of laws that proved more or less futile, if not unwise, because of this defect. In colonial times we had the constant violation of the Navigation Acts, the complete failure of the Molasses Act, the futility of the attempts to regulate wages, and the inability of much of the currency legislation to accomplish all the purposes for which it was passed. The fiasco of the effort to control prices during the Revolution provides a striking case. In the subsequent period there is scarcely a field of economic legislation that cannot provide many illustrations of similar errors; we need only mention the laws dealing with the tariff, public lands, labor, banking, public utilities, and trusts or the obstacles encountered in the recent effort to promote recovery. The sooner it is generally recognized that there is no way of legislating ourselves into an economic millenium and that any legislation which hopes to make progress in that direction must consider the economic forces with which it has to deal, the faster will be the progress made.

Another result of the ignorance concerning, or neglect of, economics has been the tendency to exaggerate the consequences attributed to either existing or proposed legislation and so mislead the people. This was particularly noticeable whenever any economic issue became prominent in politics and propaganda became widespread. The tariff controversy affords a striking illustration of this, or the endless panaceas advanced to save the country from one or another evil. The businessman has been especially prone to attribute results to laws out of all relation to their actual effects, particularly when they happened to be laws that he did not like. At best it is extremely difficult to determine the effect of legislation in the complex interaction of economic forces; but unless ignorance and deliberately misleading propaganda can be overcome, mistakes in social control of economic affairs will continue to be frequent.

A second prominent cause for much legislation, undesirable in its effects upon the standard of living, has been the great influence exerted by various producer groups to secure laws favorable to their interests and the very common failure to safeguard the interests of the consumers, despite the fact that the interest of the consumer in securing a higher standard of living is the ultimate economic objective of the productive process. Though less serious in their consequences, even the producer group interests that lack effective organization and political power are apt to suffer similarly. Whereas the economic order may properly be controlled for the purpose of furthering such objectives as national defense, public morals, or other social ideals, it has too frequently hap-

pened that such ideals, though often advanced as a blind, provided no adequate justification for the action taken. One of the chief reasons for this neglect of the consumer's interest, as should appear from the preceding account of the struggle over the distribution of income, is that producer groups organize in an effective manner to promote their interests and consumers commonly fail to do so.

In the last analysis the consumer has only himself to blame for this outcome. He himself is always dominated in his action by his particular interest as a producer, whether he be a farmer, a manufacturer, a capitalist, or a laborer. His ultimate interest, as a consumer, is spread over all the goods and services that he consumes, and any specific law is likely to affect only a few of these things. Even if the consumer knows what that effect will be, which is seldom the case, it is commonly so small an item in the total of his outlay that he will not bother to do anything about it.

Theoretically, the lawmaker is supposed to look after the consumer's interest as an essential factor among the things that constitute the general welfare. Practically, as is only too clear in our history, he is subject to the strong pressure of the well-organized producer groups, especially those of his own constituency, while any pressure from consumers is almost unknown. Also, the lawmaker may be almost as ignorant of the consumer's interest as the consumer himself, and his conception of the producer's interest is likely to be determined by that of his particular constituency rather than that of the nation. Too frequently, also, it is the interest of a particular political party in maintaining itself in power that dominates legislative action. We need only recall the logrolling, the bargaining of special interests, and the pork-barrel type of legislation, to say nothing of the graft and corruption that have prevailed—practically always owing to producer interests—as illustrating the point.

Each producer group has its own dominant interest; the great interests of consumers are for the most part common interests. Everybody is a consumer and the old saying that everybody's business is nobody's business is nowhere more strikingly illustrated than in the history of our economic legislation. What has been said must not be taken as implying that consumer interests are never dominant in shaping laws but only that such is far too seldom the case. Nor does it imply that producer interests should be ignored. It does imply that all producer interests rather than a few should be considered and that even then the consumer's long-run interest should be the ultimate determining factor as far as purely economic objectives are involved.

Another cause for failure to accomplish more, though one for which much better excuses can be found, has been the general lack of attempts at farsighted planning on a comprehensive scale and the tendency to be

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content with temporizing measures or to let matters drift until a crisis compelled action, which too often turned out to be hasty and ill-advised. There have, to be sure, been many cases where in some limited field people tried to look ahead into the future and plan accordingly; but it is difficult to understand why the country should wait nearly 150 years before even attempting such a broad survey of current trends and the lines of action they involved as those initiated by Presidents Hoover and F. D. Roosevelt. Under the dominance of a laissez-faire policy, but also in part owing to our governmental framework, the railroad system with its different gauge tracks was constructed without effective coordination, our banking system has at times been chaotic and still lacks needed centralization, the public land laws were shortsighted, the tariff was made the football of temporary, shifting conditions, cities grew heedless of the problems they were creating. This list could easily be extended.

That more farsighted planning should have been attempted and might have accomplished much is clear. Yet we must admit that in an age of such rapid changes in the economic order successful planning would have required the highest type of scientific imagination. The statesmen who acquired Louisiana Territory simply to get New Orleans and the outlet of the Mississippi had not the slightest conception of what was to prove the real significance of their action as shown by the developments of the next 50 years; yet they were accounted wise men.

If we again look back over our history to inquire what sort of developments would most likely have upset careful efforts at economic planning, we find two that are outstanding: war and those due to the progress of science and technology. How the temporary conditions arising out of war often led to changes that endured long after those conditions had passed presents an interesting study in our history. Such changes are prominent in legislation originating in postwar depressions, or that affecting money and banking and fiscal policy. The effect of the War of 1812, the Civil War, and the first World War in boosting tariff duties is a striking case, for had it not been for these wars there is every reason to presume that the general level of duties would have remained much lower. In the long run, however, it is the changes that have their origin in the advance of science that have produced the most sweeping and revolutionary effects and present the most serious obstacle to success in efforts at farsighted planning.

Finally, there are several other common causes for failure to accomplish more that have their origin in the general character and framework of our government. The nation has accepted a democratic type of government with a representative system and a written constitution as being the best means for attaining its ideals. Yet, like every other type of government, this is not free from imperfections, and it is important that

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these should be recognized in order, as far as possible, to guard against their undesirable results.

In addition to the points already noted, which in part go back to this same cause, certain others should at least be mentioned. One is the slowness with which needed legislation is secured. It is a commonplace that our laws are 25 years or more behind the times. Doubtless it is an excellent maxim to make haste slowly, but in the rapidly changing economic order of the last 150 years our democracy seems to have overdone this. In part it is a product of ignorance, inertia, and a widespread unwillingness to make the effort necessary to assume the responsibilities of citizenship. People are slow to recognize the rise of a new problem and still slower to act in securing the needed legislation. Even when secured, the laws may run afoul of the courts—possibly desirably so and possibly not.

Another source of failures was the slowness with which the country recognized the importance of developing a well-trained, adequately paid group of civil servants, especially in local and state government. The spoils system led to inefficiency and inadequate pay, repelled the competent, and promoted corruption. The system of written constitutions made difficult of amendment, combined with a judiciary brought up under the prevailing type of legal training, was another source of failure in an age of rapid economic change, though it also helped to check unwise and hasty action. No government that is not well adapted to the existing economic order can be expected to perform its many essential economic functions in an efficient manner. Adaptation has proved easiest and most common in the case of local government. Amendment of state constitutions is often difficult; complete revision, far more so.

That the Federal Constitution should have survived to this day, not only without general revision but with so few amendments, in view of the extent to which its specific provisions were shaped by the economic order of 1787 and the revolution in that order which has since taken place, is the greatest tribute to the wisdom of the founders. Yet nobody who has watched the efforts of forty-eight competing states or the devious indirect means to which the Federal government has been forced to resort, when it had any chance at all to deal with economic problems that had become national in character, would claim that the particular division of powers adopted in 1787 was well adapted to the needs of today.

There seems every reason to believe that in the future wise and efficient social guidance of our economic affairs will prove more important than ever. If we take one final glimpse back over our economic history and ask what were the outstanding things that were most responsible for advancing the standard of living, we might single out two. Clearly recognizing that everything reacted on nearly everything else and that the achievement was the cumulative effect over time of this infinitely complex

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interaction, we might still pick out as most important in their influence: (1) a virgin continent of remarkably rich and varied resources; (2) the progress of science and technology which made available to an energetic people, desirous of improving their economic condition, facilities for developing these resources such as no people had ever possessed theretofore.

Of these two the second was by far the more important; without it the achievement would have been relatively meager. In other words, the achievement was far more a product of man's learning how to cooperate better with nature by gaining a knowledge of her laws than it was a product of learning how to secure a better cooperation between man and man, though the final outcome was dependent on both processes. And, although we cannot clearly separate or measure the effects, it is unlikely that any great portion of this achievement could be attributed to a marked superiority in the wisdom and ability with which our economic life was governed. After all, other nations less favorably circumstanced also made rapid economic progress.

Of particular significance for the future is the fact that the peculiarly favorable chance combination of these two things, which in the last 150 years has raised the power and the standard of living of the nation to such a preeminent height, is something that cannot be counted upon to endure. The natural resources of the nation are still great and some, with proper care, may prove enduring. Others have been sadly depleted while more recently developed countries enjoy many of the advantages similar to those that we possessed in our youth. Though scientific knowledge may be expected to advance, it is seldom possible to confine it to one nation and in these days, more quickly than ever, it becomes the property of all.

In addition, two other advantages enjoyed in the past, which were not without importance, seem destined to disappear. In the transit of civilization from the Old World to the New in the colonial period it was easy to cast off much of the heritage of outworn social institutions and habits that tended to check progress, and the attainment of political independence made possible still more complete adjustment to the needs and ideals of the day. But with swift changes in the economic order since that time, the country has been accumulating a heritage from its own past, sustained by inertia and the power of vested interests in maintaining the *status quo*, which tends to check progress. The geographic isolation and the comparative freedom and political security that it provided, once the nation attained maturity, were advantages of no slight economic significance which the recent course of developments shows will be far less marked in the future. Finally, the growing complexity and interdependence in both the economic and the whole social order will necessitate a greater amount of social control than ever.

Thus, in the face of a future in which the unusual combination of circumstances so favorable to the rapid economic advance of the United States and its people in the past cannot be expected to continue unchanged, it becomes most important to secure wise and efficient social direction and control of the economic order. To further this objective, by indicating what we can learn from past experience about the causes for success or failure of efforts to promote economic progress, is the main, though by no means the only, purpose of the study of economic history.

BIBLIOGRAPHY

Introductory Note. This condensed bibliography is designed to do two things: (1) It lists the chief available sources where one can find far more detailed bibliographies dealing with the main general topics covered in this volume than can be provided here. Books, other than pure bibliographies, particularly important for the broad scope of subject matter covered in their bibliography are indicated by an asterisk (*) before the title. (2) It seeks to list the most important books of a fairly comprehensive character that deal with the main topics indicated by the general subject headings of the chapters. Although relatively few books confined to the more specialized phases of these topics have been mentioned, an effort has been made to include the most important and a somewhat larger proportion of the more recent publications the titles of which might not be found in older bibliographical lists. For most monographs, journal articles, source material, and all works in foreign languages the other bibliographies referred to should be consulted.

To save frequent duplication in listing books, the bibliography has been divided into two main parts. The first part, following the chronological division in this volume, lists the books of a more general character significant for each period or for the history as a whole. The second part is divided topically under the general headings suggested by the subjects of most chapters and lists the books dealing primarily with these topics or some phase of them regardless of period. An exception is made in the case of topical studies important for only a brief period to which a special chapter is devoted, in which case it is generally listed under that period. Since many books do not fit into simple classifications, decision often has had to be arbitrary. The classification, although not exactly corresponding with the various chapter headings, approaches it closely enough so that for the purpose of easier reference the portions have been indicated where the material relating to each chapter will, for the most part, be found.

ECONOMIC HISTORY: ITS CHARACTER AND SIGNIFICANCE

(Chap. I)

For a very useful bibliography see E. E. Edwards, "References on Economic History as a Field of Research and Study," Department of Agriculture, Bibliographical Contribution 31, Washington, 1936. An excellent article on economic history is in "Encyclopaedia of the Social Sciences," vol. 5. C. W. Wright, "The Nature and Objectives of Economic History," *The Journal of Political Economy*, vol. 46, somewhat expands the views presented in Chap. I of this volume. An article by R. H. Tawney, "The Study of Economic History," *Economica*, vol. 13, and a pamphlet of the same title by J. H. Clapham, Cambridge, 1929, both being inaugural lectures, well deserve reading.

There are many books dealing with the economic interpretation of history. The best discussions of the moderate viewpoint will be found in H. Sée, "The Economic Interpretation of History," New York, 1929, and a book of the same title by E. R. A. Seligman, New York, 1922, the latter including more of an historical account. Few of the books published in the endless controversy over the Marxian interpretation are free from bias. M. M. Bober, "Karl Marx's Interpretation of History," Cambridge, 1927, is perhaps the most scholarly attempt to present and criticize Marx's views. Among other possible interpretations the

ECONOMIC HISTORY OF UNITED STATES

best antidote is provided by S. Mathews, "The Spiritual Interpretation of History," Cambridge, 1916. An attempt to apply the Marxian thesis to general American history can be found in A. M. Simons, "Social Forces in American History," New York, 1911.

THE PHYSIOGRAPHIC BACKGROUND AND THE INDIANS

(Chap. II)

Good descriptions of the country's physical geography can be found in J. R. Smith, "Men and Resources: A Study of North America and Its Place in World Geography," New York, 1937; C. C. Colby, "Source Book for the Economic Geography of North America," 3d ed., Chicago, 1927, or H. H. McCarty, "The Geographic Basis of American Economic Life," New York, 1940. An historical survey is provided by E. C. Semple, "American History and Its Geographic Conditions," Boston, 1933. Special aspects are stressed in A. B. Hulbert, "Soil: Its Influence on the History of the United States," New Haven, 1930, and in I. Bowman, "Forest Physiography," New York, 1911.

The aboriginal Indian life is described in C. Wissler, "The American Indian," 3d ed., New York, 1938. A short popular general history is given in E. Huntington, "The Red Man's Continent," New Haven, 1919, and a sympathetic narrative stressing problems by F. E. Leupp, "The Indian and His Problems," New York, 1910. A view of the more recent social conditions is to be found in G. E. E. Lindquist, "The Red Man in the United States," New York, 1923.

GENERAL WORKS

For a wide range of topics and useful bibliographical references, consult E. R. A. Seligman, ed., "Encyclopaedia of the Social Sciences," 15 vols., New York, 1930-1935, and J. T. Adams, ed., "Dictionary of American History," 6 vols., New York, 1940. The best compilation of bibliographies is H. P. Beers, "Bibliographies in American History," New York, 1938. The standard topical reference list is E. Channing, A. B. Hart, and F. J. Turner, "Guide to the Study and Reading of American History," rev. ed., Boston, 1912, but it is weak on the economic aspects and suffers from being out of date. The *Statistical Abstract of the United States*, published annually by the Bureau of the Census, provides an indispensable collection of statistical data, the most important series being carried back as far as practicable, and includes references to the sources. L. M. Hacker, R. Modley, and G. R. Taylor, "The United States: A Graphic History," New York, 1937, is a useful, though limited, collection of pictorial statistical graphs with comments. C. O. Paullin, "Atlas of the Historical Geography of the United States," Washington, 1932, includes numerous maps presenting economic data. L. F. Schmeckebier, "Government Publications and Their Use," 2d ed., Washington, 1939, provides an excellent introduction to the use of this material.

For the general textbooks and similar works on American economic history, consult E. E. Edwards, "List of American Economic Histories," Department of Agriculture, Bibliographical Contributions 27, 2d ed., Washington, 1939, which includes tables of contents. For one who wishes to supplement the present text by another, the most useful is E. C. Kirkland, "A History of American Economic Life," 2d ed., New York, 1940, since it is written from the point of view of the historian rather than that of the economist and includes considerable material of a character not covered in this volume. It also has the largest and the most discriminating critical bibliography of any of the general texts. A more critical narrative, also written from the historian's point of view, is F. A. Shannon, "America's Economic Growth," New York, 1940. L. M. Hacker, "The Triumph of American Capitalism," New York, 1940, stresses the reaction of the rise of capitalism on the country's political and economic history, partly in protest against too much emphasis on the influence of the frontier, but gives little space to the period since the Civil War. It can

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well be supplemented by A. N. Holcombe, "The Middle Class in American Politics," Cambridge, 1940, and by F. J. Turner, "The Significance of Sections in American History," New York, 1932. The South is the only large section for which a general economic text has been provided, as in E. Q. Hawk, "The Economic History of the South," New York, 1934. Articles of varying value on the same field will be found in vols. 5 and 6 of "The South in the Building of the Nation," Richmond, 1909. Though not confined to the United States, an excellent account of the reaction of changing stages of capitalism on business enterprise will be found in N. S. B. Gras, "Business and Capitalism," New York, 1939; a brief outline of the American development is given in the same author's Introduction to "Case Book in American Business History," New York, 1939, which also provides readings illustrative of business problems and practices. Among the other collections of supplementary readings G. S. Callender, ed., "Selections from the Economic History of the United States, 1765-1860," Boston, 1909, is notable for the interpretive grasp and insight of the editor's brief introductory statements for each chapter which are very valuable. A much wider range of selections is offered in both F. Flugel and H. U. Faulkner, eds., "Readings in the Economic and Social History of the United States, 1773-1929," New York, 1929, and E. L. Bogart and C. M. Thompson, eds., "Readings in the Economic History of the United States," New York, 1916, the latter covering the colonial period, though not coming down to so recent a date.

For the general background of political and social history S. E. Morison and H. S. Commager, "The Growth of the American Republic," rev. ed., 2 vols., New York, 1937, can be recommended as a general text that is scholarly, balanced, broad in scope, and well written, though beginning only with the preliminaries of the Revolution. A broader survey of cultural aspects of American life with considerable stress on economic influences can be found in C. A. and M. R. Beard, "The Rise of American Civilization," 2 vols., New York, 1927, which is brought up to date in the same authors' "America in Midpassage," 2 vols., New York, 1939. The most extensive and useful general histories are provided by two series the individual volumes of which are written by different authors and so vary in value. A. B. Hart, ed., "The American Nation," 28 vols., New York, 1904-1908, provides the most extensive general history, but it is almost exclusively political, economic conditions receiving relatively little attention. The critical bibliographies are good for material available up to the date of publication. The individual volumes, though in parts suffering likewise from not being up to date, are still generally useful on the particular periods covered. A. M. Schlesinger and D. R. Fox, eds., "A History of American Life," 12 vols., New York, 1927- , still lacking the two volumes covering the years 1765-1830, best reflects the current trend to broaden the scope of historical surveys to include the whole cultural background, and has excellent bibliographies. A distinctly popular yet scholarly series, including various economic topics, is A. Johnson, ed., "The Chronicles of America," 50 vols., New Haven, 1919. R. H. Gabriel, ed., "The Pageant of America: A Pictorial History of the United States," 15 vols., New Haven, 1925-1929, is unexcelled for its collection of pictorial material. Several volumes are devoted to various phases of economic life and all are provided with running comments. Of the larger histories written by single individuals, J. B. McMaster, "History of the People of the United States from the Revolution to the Civil War," 8 vols., New York, 1888-1913, is unique for the amount of material relating to the everyday life of the people and covers many economic topics, though the presentation lacks systematic organization. E. Channing, "A History of the United States," 6 vols., New York, 1905-1925, covers the whole period from the colonial settlement down to the close of the Civil War and is careful and scholarly, but gives rather scant attention to economic affairs and is curiously blind to economic sectionalism. General histories primarily of value for only one period are listed in the subsequent section covering the different periods.

ECONOMIC HISTORY OF UNITED STATES

THE WORLD BACKGROUND: GENERAL

(Chaps. III, XVI, and XXVII)

An excellent and well-written one-volume general survey of European economic history is provided in H. Heaton, "Economic History of Europe," New York, 1936. A more detailed account of the later period is W. Bowden, M. Karpovitch, and A. P. Usher, "An Economic History of Europe since 1750," New York, 1937, which also includes a good bibliography. For England, outstanding works are: E. Lipson, "The Economic History of England," 3 vols., London, 1915-1931, which carries the account through the age of mercantilism; P. Mantoux, "The Industrial Revolution in the Eighteenth Century," 2d ed., New York, 1927; and J. H. Clapham, "An Economic History of Modern Britain," 3 vols., Cambridge, 1926-1938, which covers the period 1820-1914 with great thoroughness. J. B. Williams, "A Guide to the Printed Materials for English Social and Economic History, 1750-1850," 2 vols., New York, 1926, is an indispensable annotated bibliography. G. R. Porter, "The Progress of the Nation," rev. ed., London, 1912, is a convenient summary of much nineteenth-century data. The volumes of the "Cambridge History of the British Empire," Cambridge, 1929- , give considerable attention to economic developments. A somewhat cursory survey of developments in various parts of the Empire can be found in L. C. A. Knowles, "The Economic Development of the British Overseas Empire," 3 vols., London, 1924-1936. Much the ablest account of Canada is found in M. Q. Innis, "An Economic History of Canada," Toronto, 1935, which ends at 1914. An immense quantity of valuable material for the period since 1867 is available in the *Report* of the Royal Commission on Dominion-Provincial Relations, 3 vols., Ottawa, 1940, together with its many accompanying documents, among which that of W. A. Mackintosh, "The Economic Background of Dominion-Provincial Relations," App. 3, is particularly illuminating. In the extensive series on "The Relations of Canada and the United States" issued by the Carnegie Foundation for International Peace, many of the volumes deal particularly with economic relations affecting the United States.

For convenient general accounts of other sections, see E. Shann, "An Economic History of Australia," Cambridge, 1930; V. Anstey, "The Economic Development of India," London, 1936, which covers only the modern period; M. H. de Kock, "Selected Subjects in the Economic History of South Africa," Cape Town, 1924, which is fairly broad in scope despite its title and is condensed and continued in the author's "The Economic Development of South Africa," London, 1936. For modern Japan, see H. G. Moulton, "Japan: An Economic and Financial Appraisal," Washington, 1931; S. Uyehara, "The Industry and Trade of Japan," 2d ed., London, 1936, and Mitsubishi Economic Research Bureau, "Japan's Trade and Industry," London, 1936. There are no really satisfactory books in English on the economic history of Latin-American countries. Useful as summarizing one of the most significant general trends is C. J. H. Hayes, "The Historical Evolution of Modern Nationalism," New York, 1931, and the same author's "Essays in Nationalism," New York, 1926. The League of Nations has published a mass of material, including much of an economic character, which can be located through A. C. de Breycha-Vauthier, "Sources of Information: A Handbook on the Publications of the League of Nations," London, 1939. General books on foreign developments particularly significant in relation to special periods are noted in the sections devoted to those periods.

GENERAL WORKS ON PARTICULAR PERIODS

For each period, the related volumes in "The American Nation" series and the "History of American Life" series, previously cited, should be consulted.

The best short, general survey of the colonial period is M. W. Jernegan, "The American Colonies," New York, 1923, which ends at 1750. Somewhat more detailed are O. P. Chit-

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wood, **"A History of Colonial America,"* New York, 1931, and C. P. Nettles, *"The Roots of American Civilization,"* New York, 1938. The last covers the field topically and, like Chitwood, carries the narrative through the Revolution. The works of H. L. Osgood, *"The American Colonies in the Seventeenth Century,"* 3 vols., New York, 1904-1907, and *"The American Colonies in the Eighteenth Century,"* 4 vols., New York, 1924-1925, are unsurpassed in their field and, though chiefly devoted to political institutions, have considerable material of economic interest. C. M. Andrews, *"The Colonial Period of American History,"* 4 vols., New Haven, 1934-1938, though covering only limited phases, is useful in its stress on the English background. The last volume in the series deals with mercantilism. An outstanding work of scholarship on this last subject, dealing with it in a broad way and covering the Continent as well as England, is E. F. Heckscher, *"Mercantilism,"* 2 vols., London, 1935. Particularly valuable for its general survey of English colonial policy down to 1783 is the first volume of the **"Cambridge History of the British Empire,"* Cambridge, 1929. A good brief account is H. E. Egerton, *"A Short History of British Colonial Policy,"* 2d ed., Oxford, 1909. Of a more strictly economic character is W. B. Weedon, *"Economic and Social History of New England, 1620-1789,"* 2 vols., Boston, 1890, which is still useful as a convenient collection of facts despite the utter aimlessness of its organization. P. A. Bruce, *"The Economic History of Virginia in the Seventeenth Century,"* 2 vols., New York, 1895, is a painstaking work. E. A. J. Johnson, *"American Economic Thought in the Seventeenth Century,"* London, 1932, unfortunately provides the only careful general study of this topic for any period. C. Bridenbaugh, *"Cities in the Wilderness, 1625-1742,"* New York, 1938, is excellent in a neglected field and contains much of economic interest. Particularly enlightening, not only on price movements but also on changing business conditions, is A. Bezanson, R. D. Gray, and M. Hussey, *"Prices in Colonial Pennsylvania,"* Philadelphia, 1935.

General works of importance for the period 1763-1815, for the Civil War, and for the first World War and its aftermath, to which special chapters are devoted, are listed under separate headings which follow this section.

For the period 1815-1860 there is a scarcity of general works of importance from the economic point of view. W. B. Smith and A. H. Cole, *"Fluctuations in American Business, 1790-1860,"* Cambridge, 1935, gives a valuable survey of the general trends in business with much statistical data. A Bezanson, R. D. Gray, and M. Hussey, *"Wholesale Prices in Philadelphia, 1784-1861,"* Philadelphia, 1936, has much material that is similarly useful. *"Eighty Years Progress,"* Hartford, 1869, has useful essays on a considerable range of topics. J. D. B. DeBow, *"Industrial Resources and Statistics of Southern and Western States,"* 3 vols., New Orleans, 1852-1853, is a very convenient collection of data. For more general histories, in addition to McMaster and the appropriate volumes in the two large series previously cited, F. J. Turner, *"The United States, 1830-1850,"* New York, 1935, and W. E. Dodd, *"The Cotton Kingdom,"* New Haven, 1919, will be found well worth perusal.

For the period since 1860, a very useful annual survey of events is provided by *"Appleton's Annual Cyclopaedia,"* New York, 1868-1903, and *"The American Year Book,"* New York, 1911- (except 1920-1924). The Public Affairs Information Service, *Bulletin*, New York, 1915- , is invaluable as an index to current publications in this field. A general text survey, distinctly more analytical than most and stressing twentieth-century developments, is E. D. Durand, *"American Industry and Commerce,"* Boston, 1930. Short historical accounts of a large range of special lines of economic activity not readily available elsewhere can be found in C. M. Depew, ed., *"One Hundred Years of American Commerce,"* 2 vols., New York, 1895. *"The Tenth Census of the United States,"* 22 vols., Washington, 1883-1888, is unique in making a special attempt to offer an historical survey of many of the subjects covered. D. A. Wells, *"Recent Economic Changes,"* New York,

1889, competently discusses various current tendencies. The "Reports" of the United States Industrial Commission, 19 vols., Washington, 1900-1902, provide a mass of factual material on agriculture, manufacturing, transportation, trusts, labor, etc., which is summarized in the final volume. The Report of the Committee of the President's Conference on Unemployment, "Recent Economic Changes in the United States," 2 vols., New York, 1929, provides a general survey of conditions in the postwar decade. The Report of the President's Research Committee, "Recent Social Trends in the United States," 2 vols., New York, 1933, is invaluable and, up to that date, unique in representing the first comprehensive effort to survey outstanding social trends with the view of formulating large national policies for the future. Some thirteen special monographs prepared in this connection discuss different topics in detail. The current series of reports being issued by the National Resources Committee, several of which are listed under various subject headings, are carrying on a similar line of investigation in a somewhat narrower field and are also very valuable. A very useful collection of statistical data, well supplemented by charts and covering a fair range of economic topics, is available in the National Industrial Conference Board, "Studies in Enterprise and Social Progress," New York, 1939. For economic developments outside the United States the general works noted in the preceding section can be supplemented by J. H. Clapham, "The Economic Development of France and Germany, 1815-1914," 4th ed., Cambridge, 1936, which is the most satisfactory work in English; A. Viallanti, "Economic Imperialism and International Economic Relations during the Last Fifty Years," New York, 1923; H. Feis, "Europe, the World's Banker, 1870-1914," New Haven, 1930; P. T. Moon, "Imperialism and World Politics," New York, 1926; and L. H. Jenks, "The Migration of British Capital to 1875," New York, 1927.

THE REVOLUTIONARY PERIOD, 1763-1783

(Chaps. XI and XII)

There is as yet no thorough study of general economic conditions in the decade preceding the Revolution. An extremely valuable study touching on one phase is A. M. Schlesinger, "The Colonial Merchants and the American Revolution, 1763-1776," New York, 1918. C. M. Alvord, "The Mississippi Valley in British Politics, 1763-1775," 2 vols., Cleveland, 1917, is a thorough study of another phase which can be supplemented by T. P. Abernethy, "Western Lands and the American Revolution," New York, 1937. More general in scope are C. L. Becker, "The Eve of the Revolution," New Haven, 1911, ably written; C. M. Andrews, "The Colonial Background of the American Revolution," New Haven, 1924, also excellent; C. H. Van Tyne, "The Causes of the War of Independence," New York, 1922, and H. E. Egerton, "The Causes and Character of the American Revolution," Oxford, 1923, written by an English authority.

For the war period, L. C. Hatch, "The Administration of the American Revolutionary Army," New York, 1904, and C. O. Paulin, "The Navy of the American Revolution," Cedar Rapids, 1906, give some attention to the economic problems involved. Though primarily concerned with the period's stimulus to a larger scale of business undertakings, some light on contracts for war supplies and business methods is obtained from R. A. East, "Business Enterprise in the Revolutionary Era," New York, 1938. W. G. Sumner, "The Financier and Finances of the American Revolution," 2 vols., New York, 1891, which centers about Morris, is still useful. V. G. Setser, "The Commercial Reciprocity Policy of the United States, 1774-1829," Philadelphia, 1937, surveys the commercial problems that arose. A. Nevins, "The American States during and after the Revolution, 1775-1789," New York, 1927, is most important in a neglected field. J. F. Jamieson, "The American Revolution Considered as a Social Movement," Princeton, 1926, is an admirable summary of the significant social consequences.

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THE CONFEDERATION AND THE CONSTITUTION

(Chap. XIII)

For these years Nevin's work, cited in the preceding section, is important and that of Setser is useful. A careful study of the economic conditions during these years is badly needed. Light on price movements is given in A. Bezanson, R. D. Gray, and M. Hussey, "Wholesale Prices in Philadelphia, 1784-1861," Philadelphia, 1936. Lord John Sheffield, "Observations on the Commerce of the American States," 6th ed., London, 1784, is important for its statistics and as reflecting the point of view that dominated British policy. The same can be said of Society of Ship Owners of Great Britain, "Collection of Interesting and Important Reports and Papers on the Navigation and Trade of Great Britain," etc., London, 1807.

M. Farrand, "The Framing of the Constitution of the United States," New Haven, 1913, is a well-balanced account by the editor of the records of the Convention. C. A. Beard, "An Economic Interpretation of the Constitution of the United States," New York, 1913, brings out the economic influences involved. These are also reflected in the monograph of O. G. Libby, "The Geographical Distribution of the Vote of the Thirteen States on the Federal Constitution, 1787-88," Madison, 1894; they are minimized in C. Warren, "The Making of the Constitution," 2d ed., Boston, 1937. A recent careful survey covering the genesis and earlier years of development is found in H. C. Hockett, "The Constitutional History of the United States, 1776-1826," New York, 1939. The document is interestingly viewed from a wide range of angles by a large group in C. Read, ed., "The Constitution Reconsidered," New York, 1938.

THE PERIOD 1789-1815

(Chaps. XIV and XV)

For an understanding of the economic conditions during this period, a knowledge of price movements is extremely important. The various studies available are gathered together, at least in summary form, in A. H. Cole, "Wholesale Commodity Prices in the United States, 1700-1861," 2 vols., Cambridge, 1938, though the study of Philadelphia prices already cited, should also be consulted for the detailed analysis. Useful collections of statistical data are provided in A. Seybert, "Statistical Annals of the United States," Philadelphia, 1818, and T. Pitkin, "Statistical View of the United States," 2d ed., New Haven, 1835. Tench Coxe, "A View of the United States of America," Philadelphia, 1794, is an interesting contemporary survey. L. A. F. de Beaujour, "Sketch of the United States of North America," London, 1814, seems to be an almost unnoticed book which has much of economic interest. P. W. Bidwell, "Rural Economy in New England at the Beginning of the Nineteenth Century," *Transactions of the Connecticut Academy of Arts and Sciences*, vol. 20, New Haven, 1916, supplies a most illuminating account of the economic order of that section. General financial developments are best covered in W. B. Smith and A. H. Cole, "Fluctuations in American Business, 1790-1860," Cambridge, 1935. For the important subject of foreign commerce, special phases are covered in S. F. Bemis, "Jay's Treaty: A Study in Commerce and Diplomacy," New York, 1923; the same author's "Pinckney's Treaty," Baltimore, 1926; W. W. Jennings, "The American Embargo, 1807-1808," Iowa City, 1921; and L. M. Sears, "Jefferson and the Embargo," Durham, 1927. For an understanding of the European background, E. F. Heckscher, "The Continental System," Oxford, 1922, is particularly valuable and can be supplemented by W. F. Galpin, "The Grain Supply of England during the Napoleonic Period," New York, 1925. The collection of papers put out by the Society of Ship Owners, cited previously, has some useful material on this period. In addition to the general histories, there is the outstanding work of H.

ECONOMIC HISTORY OF UNITED STATES

Adams, "History of the United States of America during the Administration of Thomas Jefferson," which is carried on through Madison's administration, 9 vols., New York, 1889-1891, though economic conditions receive scant attention. For commercial policy see the previously cited work of V. G. Setser.

THE CIVIL WAR

(Chap. XXVIII)

E. D. Fite, "Social and Industrial Conditions in the North during the Civil War," New York, 1910, is the only fairly general survey of economic conditions, but is more descriptive than analytical. For the South, J. C. Schwab, "The Confederate States of America, 1861-1865," New York, 1901, is the best survey, though concentrating on financial aspects. F. A. Shannon, "The Organization and Administration of the Union Army, 1861-1865," 2 vols., Cleveland, 1928, is excellent. W. C. Mitchell, "A History of the Greenbacks," Chicago, 1903, is indispensable for price movements. E. P. Oberholtzer, "Jay Cooke, Financier of the Civil War," 2 vols., Philadelphia, 1907, is a painstaking study. Supplementing previously noted general histories are J. F. Rhodes, "History of the United States," 7 vols., New York, 1906-1912, which is the most detailed account of the period 1850-1877, but slights economic affairs; J. B. McMaster, "A History of the People of the United States during Lincoln's Administration," New York, 1927, in his characteristic manner; and J. G. Randall, "The Civil War and Reconstruction," Boston, 1937, which provides the most recent general survey and bibliography.

THE FIRST WORLD WAR

(Chaps. XLII and XLIII)

The most detailed survey of the economic phases of the American effort, though still limited in scope, can be found in B. Crowell and R. F. Wilson, "How America Went to War," 6 vols., New Haven, 1921. I. Lippincott, "Problems of Reconstruction," New York, 1919, is chiefly devoted to the war period developments other than the financial, and is a convenient survey. The Carnegie Endowment for International Peace has a very extensive series on the "Economic and Social History of the World War," edited by J. T. Shotwell, most of which is devoted to foreign countries and covers many topics in great detail and authoritatively. In the American section of this series, W. G. Leland and N. D. Mereness, "Introduction to the American Official Sources for the Economic and Social History of the World War," New Haven, 1926, provides the best key to this material. In the same series are J. M. Clark, "The Cost of the World War to the American People," New Haven, 1931, and W. D. Hines, "War History of American Railroads," New Haven, 1928, both excellent. On the important work of the War Industries Board, G. B. Clarkson, "Industrial America in the World War," Boston, 1923, is essential. In addition to textbook financial histories, A. D. Noyes, "The War Period of American Finance, 1908-1925," New York, 1926, is useful and C. O. Hardy, "War Time Control of Prices," Washington, 1940, is an excellent survey of this subject. W. W. Willoughby, "Government Organization in War Time and After," New York, 1919, provides a convenient summary.

THE POSTWAR DECADE, THE DEPRESSION, AND THE NEW DEAL

(Chap. XLIV)

The best general economic survey of the decade of the twenties is found in The President's Conference on Unemployment, "Recent Economic Changes in the United States,"

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2 vols., New York, 1929. The world situation is best covered in *The League of Nations, "Course and Phases of the World Economic Depression,"* Geneva, 1931. For the subsequent years an excellent record is provided in the League's annual "World Economic Survey," Geneva, 1932-. Also excellent for the same purpose is H. V. Hodson, "Slump and Recovery, 1929-1937," London, 1938. An able brief, but more theoretical, analysis is given in L. Robbins, "The Great Depression," London, 1934. J. A. Schumpeter, "Business Cycles," 2 vols., New York, 1939, describes this as well as earlier periods of depression and sets them in a broad and imposing theory of the business cycle.

Many of the books dealing with developments in the United States since 1929 are distinctly biased in character and it is too early to hope for an adequate general analysis of the period, though scholarly studies of some particular problems can be found. Perhaps the most useful general history of the period, though its critical comments must be considered with reference to the author's frankly stated preconceptions, is L. M. Hacker, "American Problems of Today," New York, 1938, which covers the years since 1920, though emphasizing the more recent portion. L. S. Lyon and others, "The National Recovery Administration," Washington, 1935, is the best analysis of this subject. E. G. Nourse, J. S. Davis, and J. D. Black, "Three Years of the Agricultural Adjustment Administration," Washington, 1937; J. D. Black, "Agricultural Reform in the United States," New York, 1929; and J. S. Davis, "On Agricultural Policy, 1926-1938," Stanford, 1939, represent the views of three of the leading experts in this field. An important feature of the whole postwar period is carefully surveyed in two studies of The Twentieth Century Fund, "The Internal Debts of the United States," New York, 1933, and "Debts and Recovery," New York, 1938. Various aspects of the depression are covered in two books by A. H. Hansen, "Economic Stabilization in an Unbalanced World," New York, 1932, and "Full Recovery or Stagnation?" New York, 1938. J. D. Paris, "Monetary Policies of the United States, 1932-1938," New York, 1938, and F. D. Graham, "Golden Avalanche," Princeton, 1939, are critical estimates of the government's policy. S. Bell, "Productivity, Wages and National Income," Washington, 1940, is a careful statistical analysis. J. C. Brown, "Public Relief, 1929-1939," New York, 1940, supplies the best survey of this subject and can be supplemented by National Resources Planning Board, "The Economic Effects of the Federal Public Works Expenditures, 1933-1938," Washington, 1940.

POPULATION, IMMIGRATION, THE WESTWARD MOVEMENT, AND PUBLIC LANDS

(Chaps. IV, XVII, XVIII, and XXIX)

A convenient survey, which also covers the colonial period, can be found in the census monograph, "A Century of Population Growth, 1790-1900," Washington, 1909. By far the best analytical study is W. S. Thompson and P. K. Whelpton, "Population Trends in the United States," New York, 1933. This may be supplemented by the National Resources Committee report on "The Problems of a Changing Population," Washington, 1938, and an excellent article by J. J. Spengler, "Population Movements and Economic Equilibrium in the United States," *The Journal of Political Economy*, vol. 48, 1940. An extremely useful historical survey of world trends, including migration, is A. M. Carr-Saunders, "World Population: Past Growth and Present Trends," Oxford, 1936. For the colonial period E. B. Greene and V. D. Harrington, "American Population before the Federal Census of 1790," New York, 1932, gathers together all the estimates and data that are available. S. H. Sutherland, "Population Distribution in Colonial America," New York, 1936, provides a convenient historical survey of the spread of settlement and has valuable dot maps for population distribution about 1775. Useful as covering the whole continent is H. E. Bolton and T. M. Marshall, "The Colonization of North America, 1492-1783," New York, 1920.

ECONOMIC HISTORY OF UNITED STATES

On immigration, the most important and voluminous collection of material is provided by the "Report of the Immigration Commission," 42 vols., Washington, 1911, the results of which are summarized in the two volumes of Abstracts. J. W. Jenks and W. J. Lauck, "The Immigration Problem," 6th ed., New York, 1926, is a textbook survey. E. Abbott, "Historical Aspects of the Immigration Problem," Chicago, 1926, is a carefully chosen selection of contemporary materials. M. L. Hansen, "The Atlantic Migration, 1607-1860," Cambridge, 1940, is the first careful general study of the conditions abroad that lay back of the movement and C. F. Wittke, "We Who Built America," New York, 1939, affords a general account of the settlements and work of each of the non-English racial groups except the Negro. For the latter M. N. Work, "Bibliography of the Negro in Africa and America," New York, 1927, provides extensive references. A good historical survey is given in G. M. Stephenson, "A History of American Immigration, 1820-1924," Boston, 1926.

For references on the frontier and the West in general consult F. J. Turner and F. Merk, "List of References on the History of the West," rev. ed., Cambridge, 1922, which can be supplemented by the more recent E. E. Edwards, "References on the Significance of the Frontier in American History," Department of Agriculture, Bibliographical Contributions 25, Washington, 1935. Everyone should be familiar with the famous essay which gives the volume its title in F. J. Turner, "The Significance of the Frontier in American History," New York, 1921. F. L. Paxson, "History of the American Frontier, 1763-1893," Boston, 1924, provides the best general account and the same author's "The Last American Frontier," New York, 1910, gives an interesting picture of the Far Western phase. W. P. Webb, "The Great Plains," Boston, 1931, and E. Dick, "The Sod-House Frontier, 1854-1890," New York, 1937, are both excellent on their respective regions. Useful for their concentration on economic phases of Western development are K. Coman, "Economic Beginnings of the Far West," 2 vols., New York, 1912, for the pre-Civil War period; for the later period, though limited in scope, G. C. Quiett, "They Built the West," New York, 1934. More general accounts can be found in R. E. Riegel, "America Moves West," New York, 1930, and C. Goodwin, "The Trans-Mississippi West, 1803-1853," New York, 1922. For recent internal movements generally, see C. L. Goodrich and others, "Migration and Economic Opportunity," Philadelphia, 1936. The copious index in R. G. Thwaites, ed., "Early Western Travels," 32 vols., Cleveland, 1904-1907, provides a most valuable key to the economic material found in this important series.

The only general account of the public land policy of some scope is B. H. Hibbard, "A History of the Public Land Policies," New York, 1924. A mass of undigested material can be found in T. Donaldson, "The Public Domain," Washington, 1884. For the colonial period B. W. Bond, Jr., "The Quit Rent System in the American Colonies," New Haven, 1919, and R. H. Akagi, "The Town Proprietors of the New England Colonies," Philadelphia, 1924, are excellent within their scope, as is P. J. Treat, "The National Land System 1785-1820," Boston, 1910, for its period. A. M. Sakolski, "The Great American Land Bubble," New York, 1932, is a popular history of the chief speculative crazes. L. Havemeyer, ed., "Conservation of Our Natural Resources," New York, 1930, is a useful survey of the topic. J. Ise, "The United States' Forest Policy," New Haven, 1920, and the same author's "The United States' Oil Policy," New Haven, 1927, are careful studies of these phases. The various reports of its Land Planning Committee to the National Resources Committee, Washington, 1934- , are important, as is also that of the Energy Resources Committee on "Energy Resources and National Policy," Washington, 1939.

TRANSPORTATION AND COMMUNICATION

(Chaps. XIX and XXX)

The outstanding work in this field for the period covered is B. H. Meyer and C. E. MacGill, "History of Transportation in the United States before 1860," Washington, 1917,

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though the organization is poor. I. L. Ringwalt, "Development of Transportation Systems in the United States," Philadelphia, 1888, is still useful because of its scope, especially on technology. F. A. Cleveland and F. W. Powell, "Railroad Promotion and Capitalization in the United States," New York, 1909, is really a history of the pre-Civil War period with special reference to financing and is well worth while. W. Z. Ripley, "Railroads," 2 vols., Boston, 1912-1915, includes much historical material on finance and regulation for the post-Civil War period. An excellent textbook which provides the best short historical survey of the waterways, as well as of other transport facilities, is S. Daggett, "Principles of Inland Transportation," New York, 1940. The current situation is thoroughly surveyed in H. G. Moulton and associates, "The American Transportation Problem," Washington, 1933, and E. R. Johnson, "Government Regulation of Transportation," New York, 1938, provides an up-to-date account of that topic. Admirably thorough is I. L. Sharfman, "The Interstate Commerce Commission," 4 vols. in 5, New York, 1931-1937. The most useful regional historical studies are G. E. Baker, "Formation of the New England Railroad Systems," Cambridge, 1937; U. B. Phillips, "A History of Railroad Transportation in the Eastern Cotton Belt to 1860," New York, 1908, and R. E. Riegel, "The Story of the Western Railroads," New York, 1926.

A. B. Hulbert, "Historic Highways of America," 16 vols., Cleveland, 1902-1905, is a series covering canals and trails along with highways, though not strong on the economic side. S. Dunbar, "History of Travel in America," 4 vols., Indianapolis, 1915, is popular but useful for the period down to 1870 and is very well illustrated. Popular yet careful and excellent general surveys are provided in A. F. Harlow, "Old Towpaths," New York, 1926, which covers canals; "Old Waybills," New York, 1934, on the express companies; "Old Postbags," New York, 1928, on the post office, foreign as well as domestic, and "Old Wires and New Waves," New York, 1936, covering the telegraph, the telephone, and the radio. W. E. Rich, "The History of the United States Post Office to the Year 1829," Cambridge, 1924, is an excellent work that starts with the colonial period. D. C. Roper, "The United States Post Office," New York, 1917, is popular in character. F. Presbrey, "The History and Development of Advertising," Garden City, 1929, covers European development as well as American and is well illustrated.

AGRICULTURE AND OTHER EXTRACTIVE INDUSTRIES

(Chaps. V, XX, XXXI, and XXXII)

Thanks chiefly to the activity of the Department of Agriculture bibliographical work in its field is abundant. Consult E. E. Edwards, "Guide for Courses in the History of American Agriculture," Bibliographical Contribution 35, Washington, 1939; the same author's "Bibliography of the History of American Agriculture," Bibliographical Contribution 32, Washington, 1939, and "References on Colonial Agriculture," Bibliographical Contribution 33, Washington, 1938. There are also cumulative indexes to the department's voluminous publications. For recent years "The Agricultural Index," New York, 1917- , provides the best guide to current publications. L. Bailey, "Cyclopaedia of American Agriculture," 4 vols., New York, 1907-1909, is mainly technical but includes some good articles on economic aspects. L. B. Schmidt and E. D. Ross, "Readings in the Economic History of American Agriculture," New York, 1925, is an excellent selection. There are two outstanding works of scholarship in the general history of American agriculture: P. W. Bidwell and J. I. Falconer, "History of Agriculture in the Northern United States, 1620-1860," Washington, 1925, and L. C. Gray, "History of Agriculture in the Southern United States to 1860," 2 vols., Washington, 1933. For a brief general survey coming down to more recent times A. H. Sanford, "The Story of Agriculture in the United States," Boston, 1916, is the most satisfactory. For the colonial period L. Carrier, "The Beginnings of Agriculture in

America," New York, 1923, is particularly good on the more technical side and "American Husbandry," 2 vols., London, 1775, reprinted, New York, 1939, is the best contemporary account. A. O. Craven, "Soil Exhaustion as a Factor in the Agricultural History of Virginia and Maryland, 1606-1860," Urbana, 1926, is an illuminating, scholarly work. Particular products are covered in M. B. Hammond, "The Cotton Industry," New York, 1897, R. A. Clemen, "The American Live Stock and Meat Industry," New York, 1923; C. W. Wright, "Wool Growing and the Tariff," Cambridge, 1911; T. F. Hunt, "The Cereals in America," New York, 1907; and E. E. Dale, "The Range Cattle Industry," Norman, 1930. The series of historical surveys of the more important crops since the Civil War to be found in the Department of Agriculture, *Year Books* for 1921 to 1925, Washington, 1922-1926, help to fill in the gaps on this period. L. Rogin, "The Introduction of Farm Machinery in Its Relation to the Productivity of Labor," Berkeley, 1931, though narrow in scope, is the most careful study of this topic, but can be supplemented by the National Resources Committee report on "Technological Trends" cited in the next section. E. Wiest, "Agricultural Organization in the United States," Lexington, 1923, provides the most satisfactory historical survey and can be complemented by N. Fine, "Labor and Farmer Parties in the United States, 1828-1928," New York, 1928. S. J. Buck, "The Granger Movement," Cambridge, 1913, and J. D. Hicks, "The Populist Revolt," Minneapolis, 1931, are the best accounts of outstanding episodes. E. S. Sparks, "History and Theory of Agricultural Credit in the United States," New York, 1932, is fair. The three studies of A. C. True, issued as Miscellaneous Publications, Nos. 15, 36 and 251 of the Department of Agriculture, Washington, 1928-1937, provide a detailed historical account of agricultural education, extension work, experimentation, and research.

The field of the other extractive industries, with the exception of the fisheries, is conspicuous for the lack of really scholarly general works stressing the economic aspects of developments in that field. J. E. DeFebaugh, "History of the Lumber Industry of America," 4 vols., Chicago, 1906-1909, the only fairly general survey, leaves much to be desired. T. A. Rickard, "A History of American Mining," New York, 1932, is of slight value for economic history. W. J. Nicolls, "The Story of American Coals," Philadelphia, 1904, has little history, but can be supplemented by more recent studies of the special problems of this industry. W. R. Crane, "Gold and Silver," New York, 1908, is better on the technical than the economic phase. Brief historical accounts of other mineral products can conveniently be found in the work of Glover and Cornell cited in the following section. On the fur trade Miss Coman's work on the West, previously cited, should be supplemented by H. A. Innis, "The Fur Trade in Canada," New Haven, 1930, and much material can be found in H. M. Chittenden, "The American Fur Trade of the Far West," 3 vols., Cleveland, 1902. Among works on the fisheries H. A. Innis, "The Cod Fisheries," New Haven, 1940, is outstanding for scholarship and breadth of treatment. R. G. Lounsbury, "The British Fisheries at Newfoundland, 1634-1763," New Haven, 1934, helps to fill in the colonial background. R. McFarland, "A History of the New England Fisheries," Philadelphia, 1911, is useful. Whaling is covered in W. S. Tower, "A History of American Whale Fishing," New York, 1920, and E. P. Hohman, "The American Whaleman," New York, 1928, which stresses the human side.

MANUFACTURING

(Chaps. VI, XXI, XXXIII, and XXXIV) *

The outstanding general work in this field, marked by both scholarship and a broad grasp of essentials, is V. S. Clark, "History of Manufactures in the United States, 1607-1928," 3 vols., New York, 1929. J. G. Glover and W. B. Cornell, eds., "Development of American Industries," New York, 1932, provides a brief account of a considerable range of

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industries as does C. M. Depew, ed., "One Hundred Years of American Commerce, 1795-1895," 2 vols., New York, 1896. Simply as a considerable collection of factual material down to the Civil War, J. L. Bishop, "A History of American Manufactures from 1608 to 1860," 8 vols., Philadelphia, 1866, is still useful. R. M. Tryon, "Household Manufactures in the United States, 1640-1860," Chicago, 1917, is good on that field. J. M. Swank, "History of the Manufacture of Iron in All Ages," 2d ed., Philadelphia, 1892, has a great deal of poorly organized material on the American industry. A. H. Cole, "The American Wool Manufacture," 2 vols., Cambridge, 1926, is the best general history of any American manufacturing industry. For their respective fields C. F. Ware, "The Early New England Cotton Manufacture," Boston, 1931; M. T. Copeland, "The Cotton Manufacturing Industry of the United States," Cambridge, 1912; B. E. Hazard, "The Organization of the Boot and Shoe Industry in Massachusetts before 1875," Cambridge, 1921; C. B. Kuhlmann, "The Development of the Flour-Milling Industry in the United States," Boston, 1929, and R. C. Epstein, "The Automobile Industry," New York, 1928, are excellent. The most useful general survey of inventions is W. Kaempffert, "A Popular History of American Inventions," 2 vols., New York, 1924. The reaction of inventions on a wide range of economic activities is ably presented in National Resources Committee, "Technological Trends and National Policy," Washington, 1937.

A thorough study of the corporation problem has yet to be made. The best works are A. A. Berle, Jr. and G. C. Means, "The Modern Corporation and Private Property," New York, 1933, and J. C. Bonbright and G. C. Means, "The Holding Company," New York, 1932. Twentieth Century Fund, "Big Business: Its Growth and Place," New York, 1937, is an excellent summary survey and may be supplemented by sections in National Resources Committee, "The Structure of the National Economy," Part I, Washington, 1939. H. W. Laidler, "Concentration in American Industry," New York, 1931, is convenient but must be used with discrimination. The Temporary National Economic Committee, "Investigation of Concentration of Economic Power," Washington, 1939, provides a mass of material ranging over a wide field. H. R. Seager and C. A. Gulick, Jr., "Trust and Corporation Problems," New York, 1929, is the most recent general text on this subject but, like most, is weak in analysis of the economic aspects of the problem. A. R. Burns, "The Decline of Competition," New York, 1936, is valuable as a critical survey of certain growing practices restricting competition. T. C. Blaisdell, Jr., "The Federal Trade Commission," New York, 1932, supplies a good critical account.

For the tariff F. W. Taussig, "Tariff History of the United States," 8th ed., New York, 1931, has long stood as the authoritative study and can well be supplemented by the same author's "Some Aspects of the Tariff Question," 3d ed., Cambridge, 1931, and "Free Trade, The Tariff and Reciprocity," New York, 1920. E. E. Stanwood, "American Tariff Controversies in the Nineteenth Century," 2 vols., Boston, 1903, is primarily a political history and written by a moderate protectionist. The Tariff Commission, "Dictionary of Tariff Information," Washington, 1924, is valuable for reference. P. W. Bidwell, "The Invisible Tariff," New York, 1939, is important on an increasingly significant phase of the subject. B. H. Williams, "Economic Foreign Policy of the United States," New York, 1929, will also be found useful.

LABOR

(Chaps. VII, XXII, XXXV, and XXXVI)

The outstanding historical work in this field is J. R. Commons and others, "History of Labour in the United States," 2 vols., New York, 1918, though it is largely confined to the field of organized labor. It has been summarized in M. R. Beard, "A Short History of the American Labor Movement," New York, 1920. It is continued and broadened in scope in

* "History of Labor in the United States, 1896-1932," 2 vols., New York, 1933-1935, of which the first volume, by D. D. Lescohier and E. Brandeis, covers working conditions and labor legislation and the second, by S. Perlman and P. Taft, the labor movement. H. W. Farnham, "Chapters in the History of Social Legislation in the United States to 1860," Washington, 1938, is valuable on the scattered topics covered. For the colonial period the same is true of M. W. Jernegan, "Laboring and Dependent Classes in Colonial America, 1607-1783," Chicago, 1931, and S. D. McKee, "Labor in Colonial New York, 1664-1776," New York, 1935. N. J. Ware, "The Industrial Worker, 1840-1860," Boston, 1924, presenting an interpretation differing with that in Commons, is important as is the same author's, "The Labor Movement in the United States, 1860-1895," New York, 1929, which centers about the Knights of Labor. For an excellent compact summary of recent trends see L. Wolman, "The Growth of American Trade Unions, 1880-1923," New York, 1924, and L. Wolman, "Ebb and Flow in Trade Unionism," New York, 1936. L. L. Lorwin, "The American Federation of Labor," Washington, 1933, is the best study of this subject and the same is true of P. F. Brissenden, "The I. W. W.: A Study of American Syndicalism," New York, 1919, and of C. E. Bonnett, "Employers' Associations in the United States," New York, 1922. J. R. Commons, ed., "Documentary History of American Industrial Society," 11 vols., Cleveland, 1910-1911, despite its title, is confined to labor, including slavery, prior to 1860, but reprints much material difficult of access. M. Hillquit, "History of Socialism in the United States," 5th ed., New York, 1910, is best on this topic. U. B. Phillips, "American Negro Slavery," New York, 1921, is an excellent survey which can be supplemented by the same author's, "Life and Labor in the Old South," New York, 1929, and by F. Bancroft, "Slave Trading in the Old South," Baltimore, 1931. The most important of the observations contained in his other books are summarized in F. L. Olmsted, "The Cotton Kingdom," 2 vols., New York, 1861.

Stressing the more recent trends and general problems in the labor field H. A. Millis and R. E. Montgomery, "The Economics of Labor," 3 vols., New York, 1938- , provides an authoritative survey. A good textbook is C. R. Daugherty, "Labor Problems in American Industry," 2d ed., Boston, 1938. The long series of *Bulletins* and the *Monthly Labor Review* put out by the Bureau of Labor, provide a mine of important material. Its *Bulletin*, No. 499, "History of Wages in the United States from Colonial Times to 1928," Washington, 1929, is the most useful collection of material and indicates the main sources. P. H. Douglas, "Real Wages in the United States, 1890-1926," Boston, 1930, is by far the most thorough study. More recent is M. A. Beney, "Wages, Hours and Employment in the United States, 1914-1936," New York, 1936. A standard text on its subject is J. R. Commons and J. B. Andrews, "Principles of Labor Legislation," 4th ed., New York, 1936. An excellent historical survey is supplied by E. P. Cubberley, "Public Education in the United States," Boston, 1919.

DOMESTIC AND FOREIGN TRADE

(Chaps. VIII, XXIII, XXXVII, and XXXVIII)

The leading general work in this field is E. R. Johnson and others, "History of Domestic and Foreign Commerce of the United States," 2 vols., Washington, 1915. This provides references to the chief sources on the commodities entering domestic trade and the direction of their movement but is weak on the organization of trade, a phase long neglected and difficult to secure information about until the Census of 1930. This latter source largely made possible The Twentieth Century Fund, "Does Distribution Cost Too Much?" New York, 1939, which provides the first comprehensive analytical survey of the distributive system. Some light on particular phases of earlier periods is supplied by R. L. Wright, "Hawkers and Walkers in Early America," Philadelphia, 1927; F. W. Jones,

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"Middlemen in the Domestic Trade of the United States, 1800-1860," Urbana, 1937, and on foreign trade organization by the excellent study of N. S. Buck, "The Development of the Organization of Anglo-American Trade, 1800-1850," New Haven, 1925. An elementary yet careful survey of both domestic and foreign trade is given in C. Day, "History of Commerce of the United States," New York, 1925. J. H. Frederick, "Development of American Commerce," New York, 1932, serves to bring the topic nearer to date. F. E. Melder, "State and Local Barriers to Interstate Commerce in the United States," Orono, 1937, and G. R. Taylor, E. L. Burtis, and F. V. Waugh, "Barriers to Internal Trade in Farm Products," Department of Agriculture, Washington, 1939, best survey a growing problem.

The history of foreign trade has been studied much more thoroughly than that of domestic trade, partly owing to the far more adequate data available. For the colonial period the study of G. L. Beer, "The Commercial Policy of England toward the American Colonies," New York, 1893, was subsequently developed in three works of great merit, though the need for some modification of the views then given is suggested in the very thorough study of L. A. Harper, "The English Navigation Laws," New York, 1939, which carries the history to the repeal. The same author's article on "The Effects of the Navigation Acts on the Colonies" in R. B. Morris, ed., "The Eve of the American Revolution," New York, 1939, is also excellent. Considerable light on business methods of the time as well as on trade is given in L. Sellers, "Charleston Business on the Eve of the American Revolution," Chapel Hill, 1934, and V. D. Harrington, "The New York Merchant on the Eve of the Revolution," New York, 1935. N. M. M. Surrey, "The Commerce of Louisiana during the French Regime, 1699-1763," New York, 1916, is a detailed study. J. R. Spears, "The American Slave Trade," New York, 1900, is rather scanty but can be supplemented by the extensive collection of material and comment in E. Donnan, "Documents Illustrative of the Slave Trade to America," 4 vols., Washington, 1930-1935, and by W. E. B. DuBois, "The Suppression of the African Slave Trade to the United States, 1638-1870," New York, 1904. For the background of the important colonial trade with the West Indies the most valuable studies are F. W. Pitman, "The Development of the British West Indies, 1700-1763," New Haven, 1910; A. P. Newton, "The European Nations in the West Indies, 1493-1688," New York, 1933; R. Pares, "War and Trade in the West Indies, 1739-1763," Oxford, 1936; S. L. Mims, "Colbert's West India Policy," New Haven, 1912; C. W. Cole, "Colbert and a Century of French Mercantilism," 2 vols., New York, 1939; and L. J. Ragatz, "The Fall of the Planter Class in the British Caribbean, 1763-1833," New York, 1928; the last author's "A Guide for the Study of British Caribbean History, 1763-1834," Washington, 1932, provides an extremely valuable annotated bibliography. Though covering only a short period, the best account relating to the Spanish possessions is C. H. Haring, "Trade and Navigation between Spain and the Indies in the Time of the Hapsburgs," Cambridge, 1918. E. J. Hamilton, "American Treasure and the Price Revolution in Spain, 1501-1650," Cambridge, 1934, is authoritative on the treasure movement. A very valuable historical survey of the items entering into the balance of international indebtedness, 1820-1914, is supplied in C. J. Bullock, J. H. Williams, and R. S. Tucker, "The Balance of Trade of the United States," in the *Review of Economic Statistics*, Vol. 1, Cambridge, 1919. The Department of Commerce has issued annual surveys since 1922. Books on the tariff and commercial policy are listed in the section on manufacturing.

There is no adequate general history of the merchant marine. H. Keiler, "American Shipping: Its History and Economic Condition," New York, 1913, provides a brief survey and J. R. Spears, "The Story of the American Merchant Marine," New York, 1910, a popular account. On particular phases of maritime history there are a number of very excellent books such as S. E. Morison, "The Maritime History of Massachusetts, 1783-1860," Boston, 1921; R. G. Albion, "The Rise of New York Port, 1815-1860," New York, 1937; the same author's "Square Riggers on Schedule," Princeton, 1938, which deals with

the packet lines; A. H. Clark, "The Clipper Ship Era, 1843-1868," New York, 1910, and F. L. Bennis, "The American Struggle for the British West India Carrying Trade, 1813-1830," Bloomington, 1923. F. R. Dulles, "The Old China Trade," Boston, 1930, is more popular and less systematic. For subsidies R. Meeker, "History of Ship Subsidies," New York, 1905, can be supplemented by J. E. Saugstad, "Shipping and Shipbuilding Subsidies," in Trade Promotion Series No. 129 of the Bureau of Domestic and Foreign Commerce, Washington, 1932, which covers foreign countries as well. L. W. Maxwell, "Discriminating Duties and the American Merchant Marine," New York, 1926, is best on that topic. P. M. Zeis, "American Shipping Policy," Princeton, 1938, stresses the more recent period. J. R. Smith, "The Ocean Carrier," New York, 1908, supplies a good text on the business side. The general background of the important part played by British shipping in this history can be obtained in A. W. Kirkaldy, "British Shipping: Its History, Organization and Importance," London, 1914, and in the work of L. A. Harper cited previously.

MONEY, BANKING AND FINANCIAL INSTITUTIONS

(Chaps. IX, XXIV, XXV, XXXIX, and XL)

The two best textbook historical surveys, both covering public finance as well, are D. R. Dewey, "Financial History of the United States," 12th ed., New York, 1934, and W. J. Shultz and M. R. Caine, "Financial Development of the United States," New York, 1937. The latter is a little broader in scope and more critical and the former has somewhat more useful bibliographical references. H. G. Moulton, "Financial Organization and the Economic System," New York, 1938, provides an excellent textbook survey of the present-day financial order. For the portions of the colonial period covered, C. P. Nettels, "Money Supply of the American Colonies before 1720," Madison, 1934, is excellent. The most detailed study for any colony is A. M. Davis, "Currency and Banking in the Province of the Massachusetts Bay," 2 vols., New York, 1900-1901; the same author edited the comprehensive "Colonial Currency Reprints, 1682-1751," 4 vols., Boston, 1911. A. B. Hepburn, "History of Coinage and Currency in the United States," rev. ed., New York, 1915, is good. J. L. Laughlin, "The History of Bimetallism in the United States," 4th ed., New York, 1897, is the authority on that topic. W. C. Mitchell, "History of the Greenbacks," Chicago, 1903, is an exhaustive study but can be supplemented by D. C. Barrett, "The Greenbacks and Resumption of Specie Payment, 1862-1879," Cambridge, 1931. W. G. Sumner, "History of Banking in the United States," New York, 1896, supplies a mass of poorly organized material for the period up to about 1860. J. J. Knox, "History of Banking in the United States," New York, 1900, is useful for its surveys of state developments. D. R. Dewey, "State Banking before the Civil War," Washington, 1910, is the best general analysis and should be supplemented by the excellent study of H. E. Miller, "Banking Theories in the United States before 1860," Cambridge, 1927. D. R. Dewey and J. T. Holdsworth, "The First and Second Bank of the United States," Washington, 1910, is good. R. C. H. Catterall, "The Second Bank of the United States," Chicago, 1903, is a very detailed study. L. C. Helderman, "National and State Banks: A Study of Their Origins," Boston, 1931, is useful as portraying conditions leading up to the national banking system; an adequate general history of that system is still to be written, though there is much material on particular phases of its operation. G. C. Barnett, "State Banks and Trust Companies Since the Passage of the National Banking Act," Washington, 1911, supplies the best survey of this topic. H. P. Willis, "The Federal Reserve System," New York, 1923, is a detailed account of its origin and early years. S. E. Harris, "Twenty Years of the Federal Reserve System," 2 vols., Cambridge, 1933, is the most thorough analysis of its operations. M. G. Myers, "The New York Money Market: Origin and Development," New York, 1931, has much historical material of value.

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A succinct outline of general business conditions in the United States and Great Britain, yearly from 1790 to 1925, and in various other important nations starting at a later date, is supplied in W. L. Thorp, "Business Annals," New York, 1926. A fair general outline of crises in the United States is given in T. Burton, "Financial Crises and Periods of Industrial Depression," New York, 1903. Very valuable for the period covered is W. B. Smith and A. H. Cole, "Fluctuations in American Business, 1790-1860," Cambridge, 1935. R. C. McGrane, "The Panic of 1837," Chicago, 1924, is the most detailed account of an early panic. C. F. Dunbar, "Economic Essays," New York, 1904, includes excellent short accounts of the crises in 1857 and 1860, as well as several useful articles on banking. O. M. W. Sprague, "History of Crises under the National Banking System," Washington, 1910, is an admirable analytical study. J. A. Schumpeter, "Business Cycles," 2 vols., New York, 1939, gathers together a large amount of American as well as foreign historical material in support of his cycle theory. A great deal of statistical data for the period since the Civil War, but chiefly since 1900, has been gathered and analyzed with especial reference to cyclical movements in A. F. Burns, "Production Trends in the United States since 1870," New York, 1934; F. C. Mills, "Economic Tendencies in the United States," New York, 1932; W. C. Mitchell, "Business Cycles," New York, 1928; F. R. Macauley, "Some Theoretical Problems Suggested by the Movements of Interest Rates, Bond Yields and Stock Prices in the United States since 1856," New York, 1938, and W. M. Persons, "Forecasting Business Cycles," New York, 1931.

The most important work on price history, as gathering together the chief results of the best studies available on the period covered, is A. H. Cole, "Wholesale Commodity Prices in the United States, 1700-1861," 2 vols., Cambridge, 1938. Particularly useful among the special studies noted therein, owing to the detail with which they have been carried out, are the two volumes by A. Bezanson, R. D. Gray, and M. Hussey, "Prices in Colonial Pennsylvania," Philadelphia, 1935, and "Wholesale Prices in Philadelphia, 1784-1861," Philadelphia, 1936. As covering the whole period down to 1932 and referring to the sources for later data the statistical tables in G. F. Warren and F. A. Pearson, "Prices," New York, 1933, will be found very useful.

C. Lewis, "America's Stake in International Investments," Washington, 1938, supplies the best general account of the movement of capital to and from the country. There is no satisfactory history of insurance. L. W. Zartman, "Yale Readings in Insurance," 2 vols., New Haven, 1909, includes some brief accounts and can be supplemented by The Spectator Co., "Life Insurance History, 1843-1910," New York, 1911, and C. K. Knight, "The History of Life Insurance in the United States to 1870," Philadelphia, 1920. J. E. Meeker, "The Work of the Stock Exchange," 2d ed., New York, 1930, has a little on the history of the New York exchange and J. G. Martin, "A Century of Finance," Boston, 1898, is useful on the Boston exchange.

THE GOVERNMENT AND ECONOMIC LIFE

(Chaps. X, XXVI, and XLI)

For public finance the two texts by D. R. Dewey and by W. J. Shultz and M. R. Caine, cited in the preceding section, supply the best historical outline as well as references to the most useful data and more specialized studies. In addition see the excellent Twentieth Century Fund, "Facing the Tax Problem: A Survey of Taxation in the United States," New York, 1937. Though there are numerous historical studies of special phases of public finance or the fiscal systems of particular states or cities, satisfactory general historical accounts are lacking. Various census reports, for example, that of the Tenth Census or those on "Financial Statistics of State and Local Governments," supply the most useful material.

ECONOMIC HISTORY OF UNITED STATES

A broad survey of the relation of government to the economic order is supplied in L. S. Lyon and others, "Government and Economic Life," 2 vols., Washington, 1939-1940, and can well be supplemented by J. M. Clark, "Social Control of Business," 2d ed., New York, 1939. J. T. Young, "The New American Government and Its Work," 4th ed., New York, 1940, provides an up-to-date, systematic, textbook survey stressing activities. L. M. Short, "The Development of National Administrative Organization in the United States," Baltimore, 1923, provides a useful general outline. The long series of Service Monographs of the United States Government issued by the Institute of Government Research supply good accounts of the development and character of the various services. Excellent as a comprehensive survey of recent trends up to 1933 is C. H. Woody, "The Growth of the Federal Government, 1915-1932," New York, 1934. The administrative aspects are well covered in L. D. White, "Trends in Public Administration," New York, 1933. K. H. Porter, "A History of Suffrage in the United States," Chicago, 1918, is the most usable on this topic. Constitutional developments can well be followed in A. C. McLaughlin, "A Constitutional History of the United States," New York, 1935, and J. Q. Dealey, "Growth of American State Constitutions, 1776-1914," Boston, 1914. Trends in state government are described in most general texts such as W. F. Dodd, "State Government," 2d ed., New York, 1928. A useful historical outline of the growth of activities of the city of Detroit can be found in L. D. Upson, "The Growth of a City Government," Detroit, 1931.

THE STANDARD OF LIVING

(Chap. XLV)

An extremely useful bibliography with many summaries of the books listed is F. M. Williams and C. C. Zimmerman, "Studies of Family Living in the United States and Other Countries," Department of Agriculture, Miscellaneous Publications No. 223, Washington, 1935. Whereas there is a rapidly growing accumulation of material on present-day conditions of living, almost nothing has been done to gather and analyze the scattered fragments upon which we have to depend to piece together a picture of conditions in the past so far as concrete details are concerned. For the colonial period see the various books of A. M. Earle, especially, "Home Life in Colonial Days," New York, 1898, and W. C. Langdon, "Everyday Things in American Life, 1607-1776," New York, 1937. G. Hunt, "Life in America One Hundred Years Ago," New York, 1914, is narrow in scope and impressionistic, as is inevitable when statistical data are lacking. Making use of the greater data available for recent years, T. H. Streighthoff, "The Standard of Living among the Industrial People of America," Boston, 1911, provides the best account up to that date. R. S. and H. M. Lynd, "Middletown," New York, 1929, though confined to one fair-sized mid-Western city, provides an excellent and comprehensive picture of trends in the mode of living during the preceding quarter century. This study is continued well into the depression period in "Middletown in Transition," New York, 1937. For more comprehensive recent surveys see M. Leven, H. G. Moulton, and C. Warburton, "America's Capacity to Consume," New York, 1934; the two reports of the National Resources Committee on "Consumer Incomes in the United States," Washington, 1938, and "Consumer Expenditures in the United States," Washington, 1939; Bureau of Labor Statistics, *Bulletin* Nos. 634-649, Washington, 1939-1940; Bureau of Home Economics, Department of Agriculture, Miscellaneous Publication No. 345, Washington, 1939, and Farm Security Administration, Social Research Report No. 8, on "Disadvantaged Classes in American Agriculture," Washington, 1938. G. Myers, "History of the Great American Fortunes," 3 vols., Chicago, 1910, is the only historical survey and is supplemented by the same author's, "The Ending of Hereditary American Fortunes," New York, 1939. R. B. Tucker, "The Distribution of Income among

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Income Taxpayers in the United States, 1863-1935," *Quarterly Journal of Economics*, vol. 52, is important and provides references to other sources. C. Clark, "The Conditions of Economic Progress," London, 1940, is particularly valuable as providing the most carefully worked out statistical study of the changes in the standard of living of the leading nations since around 1850.

On the character and quantity of the different classes of concrete goods and services consumed at different periods, especially before the present century, satisfactory information is generally lacking. A. F. Bemis and J. Burchard, 2d, "The Evolving House," 3 vols., Cambridge, 1933-1934, supplies a little historical material. J. Williamson, "The American Hotel: An Anecdotal History," New York, 1930, though popular, is very useful. By far the most comprehensive survey available at present was carried out under the Works Progress Administration and is summarized in P. Stapp, "Urban Housing: A Summary of Real Property Inventories, 1934-1936," Washington, 1938. A succinct general statement up to date is E. E. Wood, "Introduction to Housing: Facts and Problems," Washington, 1940. The 1940 census will supply much additional material. Almost nothing has been done on the general history of food consumption in this country. A good beginning is made in a study, published too late to be made use of in this volume, by R. O. Cummings, "The American and His Food: A Study of Food Habits and Policies in the United States," Chicago, 1940, which covers the period since 1789 and stresses diets. As far as dress is concerned, there is no lack of historical accounts of the changing styles in costume such as E. McClellan, "History of American Costume, 1607-1870," 2 vols., Philadelphia, 1904, which is very well illustrated but, like most, pays little attention to the garb of the masses. A. M. Earle, "Two Centuries of Costume in America, 1620-1820," 2 vols., New York, 1903, is also useful, as is A. B. Young, "Recurring Cycles of Fashion, 1760-1937," New York, 1937, which gives more attention to street dress. For the history of medicine and public health work see F. H. Garrison, "An Introduction to the History of Medicine," 4th ed., Philadelphia, 1929, detailed but difficult reading; F. R. Packard, "History of Medicine in the United States," 2d ed., 2 vols., New York, 1931, unsystematic and chiefly useful on the earlier period; M. P. Ravenel, ed., "A Half Century of Public Health," New York, 1921; Committee on the Cost of Medical Care, "Medical Care for the American People," Chicago, 1932, and the very thorough study of W. F. Howard, "Public Health Administration and the Natural History of Disease in Baltimore, Maryland, 1797-1920," Washington, 1924. For educational history the work of Cubberley, previously cited, can be supplemented by E. G. Dexter, "A History of Education in the United States," New York, 1904, which is broader in scope though less detailed. For the more recent period I. L. Randall, ed., "Twenty-Five Years of American Education," New York, 1924, and the extensive material in the *Bulletin of the Bureau of Education*. L. R. Wilson, "The Geography of Reading," Chicago, 1938, surveys the library facilities. F. L. Mott, "A History of American Magazines, 1741-1885," 3 vols., New York and Cambridge, 1930-1938, is an authoritative work. The history of journalism and newspapers can be covered in J. M. Lee, "History of American Journalism," rev. ed., Boston, 1923; W. G. Bleyer, "Main Currents in the History of American Journalism," Boston, 1927, and A. M. Lee, "The Daily Newspaper in America," New York, 1937, which emphasizes the business aspects. The developments in the gathering of news are well covered in V. Rosewater, "History of Cooperative News-Gathering in the United States," New York, 1930. A popular but excellent history of sports and other pursuits of leisure, with references to other sources, is F. R. Dulles, "America Learns to Play," New York, 1940, which can be supplemented by the competent recent survey in J. F. Steiner, "Americans at Play," New York, 1933. A detailed study of the use of leisure time in a wealthy suburban center is G. A. Lundberg, M. Komorovsky, and M. A. McNery, "Leisure: A Suburban Study," New York, 1934.

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SUMMARY

(Chap. XLVI)

A few books may be noted here that are particularly useful either as summarizing developments emphasized in the review or as providing a broad survey of the present-day outcome of those developments. The National Resources Committee, "The Structure of the American Economy," Part I, Washington, 1939, provides one of the most convenient pictures, well brought out in graphs, though by no means complete, of many features of the present economic order. E. G. Nourse and associates, "America's Capacity to Produce," New York, 1934, is useful in the same way and in a narrower field, S. S. Kuznets, "National Income and Capital Formation, 1919-1935," New York, 1937. The National Industrial Conference Board, "Studies in Enterprise and Social Progress," New York, 1939, gathers together much statistical data of value mostly relating to the twentieth century. F. R. Martin, "National Income in the United States, 1799-1938," New York, 1938, is the most careful attempt to carry this series so far back. An important series for a shorter period is supplied in C. Clark, "The Conditions of Economic Progress," London, 1940. Though frankly devoted to stressing the productive achievements of capitalism and passing over its disadvantages, many series of historical data of value can be found in C. Snyder, "Capitalism the Creator," New York, 1940.

see also